HCD-DP1000D

SERVICE MANUAL

Self Diagnostics Supported model

Ver 1.8 2003.12

PHOTO :E model

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

- HCD-DP1000D is the tuner, deck, DVD and amplifier section in MHC-DP1000D.

DVD Section	Model Name Using Similar Mechanism	NEW
	DVD Mechanism Type	CDM58D-DVBU9
	Base Unit Name	DVBU9
	Optical Pick-up Name	KHM-240AAA/CLNP
Tape deck Section	Model Name Using Similar Mechanism	HCD-DP800AV
	Tape Transport Mechanism Type	TCM-230AWR41/MWR41

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS: (USA model only)

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

with 8 ohm loads both channels driven, from 120 Hz – 10 kHz; rates 100 watts per channel minimum RMS power, with no more than 10% total harmonic distortion from 250 milliwatts to rated output.

Continuous RMS power output
Center speaker: 30 watts
Rear speakers: 30 + 30 watts
(8 ohms at 1 kHz, 10% THD)

Amplifier section

Canadian model:

Continuous RMS power output (reference)
Front speaker: 100 + 100 watts
Center speaker: 30 watts
Rear speakers: 30 + 30 watts
(8 ohms at 1 kHz, 10% THD)
Total harmonic distortion less than 0.07%
(8 ohms at 1 kHz, 70 W)

European model:

DIN power output (rated) 60 + 60 watts
(8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
Front speaker: 80 + 80 watts
Center speaker: 30 watts
Rear speakers: 30 + 30 watts
(8 ohms at 1 kHz, 10% THD)

Music power output (reference)
Front speaker: 150 + 150 watts
Center speaker: 60 watts
Rear speakers: 60 + 60 watts
(8 ohms at 1 kHz, 10% THD)

Other models:

The following measured at AC 120, 220, 240 V, 50/60 Hz
DIN power output (rated) 90 + 90 watts
(8 ohms at 1 kHz, DIN)
Continuous RMS power output (reference)
Front speaker: 120 + 120 watts
Center speaker: 40 watts
Rear speakers: 40 + 40 watts
(8 ohms at 1 kHz, 10% THD)

Inputs
GAME IN: voltage 250 mV,
(phono jacks) impedance 47 kilohms
MD (VIDEO) IN: voltage 450 mV/250 mV,
(phono jacks) impedance 47 kilohms
OPTICAL IN:
(Square optical connector jacks, front panel)
wavelength ——
MIC: sensitivity 1 mV,
(Except for North American and European models) impedance 10 kilohms
(phone jack)

— Continued on next page —

MINI HI-FI COMPONENT SYSTEM

9-873-314-09
2003L02-1
© 2003.12
Sony Corporation
Home Audio Company
Published by Sony Engineering Corporation

SONY®

Outputs

MD (VIDEO) OUT:	voltage 250 mV
(phono jacks)	impedance 1 kilohms
VIDEO OUT:	max. output level
(phono jack)	1 Vp-p, unbalanced, Sync negative, load impedance 75 ohms
S-VIDEO OUT:	Y: 1 Vp-p, unbalanced,
(4-pin/mini-DIN jack)	Sync negative, C: 0.286Vp-p, load impedance 75 ohms
PHONES:	accepts headphones of
(stereo mini jack)	8 ohms or more
FRONT SPEAKER :	accepts impedance of 8 to 16 ohms
REAR SPEAKER:	accepts impedance of 8 to 16 ohms
CENTER SPEAKER:	accepts impedance of 8 to 16 ohms
SUB WOOFER:	Voltage 1 V, impedance 1 kilohms

DVD player section

Laser	Semiconductor laser (DVD: λ =650 nm, CD: λ =780 nm) Emission duration: continuous
Frequency response	DVD (PCM 48 kHz): 2 Hz – 22 kHz = (±1 dB) CD: 2Hz – 20 kHz = (±1 dB)
Signal-to-noise ratio	More than 90 dB
Dynamic range	More than 90 dB

Video color system format

NTSC, PAL

DIGITAL OUT OPTICAL

(Square optical connector jack, rear panel)

Wavelength	660 nm

Tape player section

Recording system	4-track 2-channel stereo
Frequency response	40 – 13,000 Hz (±3 dB),
(DOLBY NR OFF)	using Sony TYPE I cassette, 40 – 14,000 Hz (±3 dB), using Sony TYPE II cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
Antenna	FM lead antenna
Antenna terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range

Pan American model:	530 – 1,710 kHz (with the interval set at 10 kHz) 531 – 1,710 kHz (with the interval set at 9 kHz)

European and Middle Eastern models:

	531 – 1,602 kHz (with the interval set at 9 kHz)
Other models:	531 – 1,602 kHz (with the interval set at 9 kHz) 530 – 1,710 kHz (with the interval set at 10 kHz)
Antenna	AM loop antenna
Antenna terminals	External antenna terminal
Intermediate frequency	450 kHz

General

Power requirements

North American model:	120 V AC, 60 Hz
European model:	230 V AC, 50/60 Hz
Australian model:	230 – 240 V AC, 50/60 Hz
Mexican model:	120 V AC, 60 Hz
Thailand model:	220 V AC, 50/60 Hz

Indian, Pakistani, Moroccan and Tunisian models:

	220 V AC, 50/60 Hz
Other models:	120 V, 220 V or 230 – 240 V AC, 50/60 Hz Adjustable with voltage selector

Power consumption

U.S.A. model:	205 watts
Canadian model:	205 watts
European model:	190 watts 0.5 watts (at the Power Saving Mode)
Other models:	225 watts
Dimensions (w/h/d)	Approx. 280 x 360 x 365mm

Mass

North American and European models:

	Approx. 11.0 kg
Other models:	12.0 kg
Supplied accessories:	AM loop antenna (1) FM lead antenna (1) Remote commander (1) Batteries (2) Video cable (1) Front speaker pads (8) Center and rear speaker pads (MHC-DP1000D only, 12)

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈSES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPÉMENTS PUBLIÉS PAR SONY.

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

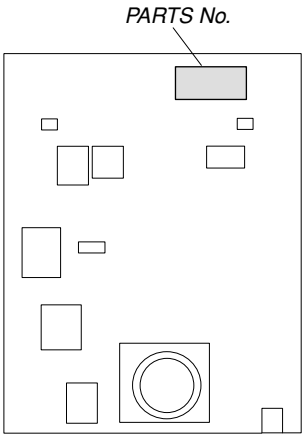
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

MODEL IDENTIFICATION

— BACK PANEL —



MODEL	PARTS No.
US model	4-236-826-0☐
CND model	4-236-826-1☐
AEP, UK model	4-236-826-2☐
SP, MY model	4-236-826-3☐
E model	4-236-826-4☐
MX model	4-236-826-5☐
EA model	4-236-826-6☐
AUS model	4-236-826-7☐
TH model	4-236-826-8☐
E91 model	4-236-826-9☐

- Abbreviation
  CND : Canadian model
  MX : Mexican model
  SP : Singapore model
  MY : Malaysia model
  AUS : Australian model
  EA : Saudi Arabia model
  TH : Thai model
  E91 : 220V AC area model

SAFETY CHECK-OUT (US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

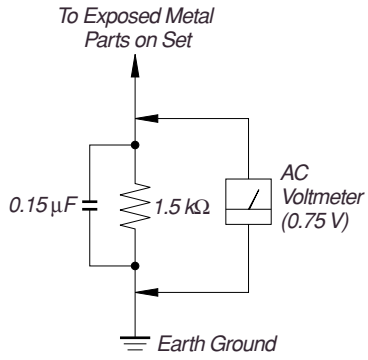


Fig. A. Using an AC voltmeter to check AC leakage.

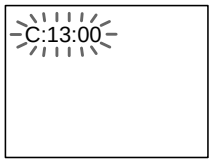
Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Self-diagnosis function

(When letters/numbers appear in the display)

When the self-diagnosis function is activated to prevent the system from malfunctioning, a five-character service number (e.g., C 13 00) with a combination of a letter and digits appears on the screen. In this case, check the following table.



First three characters of the service number	Cause and/or Corrective Action
C 13	The disc is dirty ➡Clean the disc with a soft cloth (page 54).
C 31	The disc is not inserted correctly. ➡Re-insert the disc correctly.
E XX (XX is a number)	To prevent a malfunction, the system has performed the self-diagnosis function. ➡Contact your nearest Sony dealer or local authorized Sony service facility and give the 5-character service number. Example: E 61 10

• DISC TRAY LOCK

The disc tray lock function for the antitheft of an demonstration disc in the store is equipped.

Releasing Procedure :

1. Press three buttons of [PLAY MODE] , [■] and [◀◀] simultaneously.
2. The message “UNLOCKED” is displayed and the tray is unlocked.

Note : When “LOCKED” is displayed, the tray lock is not released by turning power on/off with the [POWER] button.

TABLE OF CONTENTS

1. GENERAL ····· 6

2. DISASSEMBY ····· 7

3. TEST MODE ····· 14

4. MECHANICAL ADJUSTMENTS ····· 17

5. ELECTRICAL ADJUSTMENTS ····· 18

6. DIAGRAMS

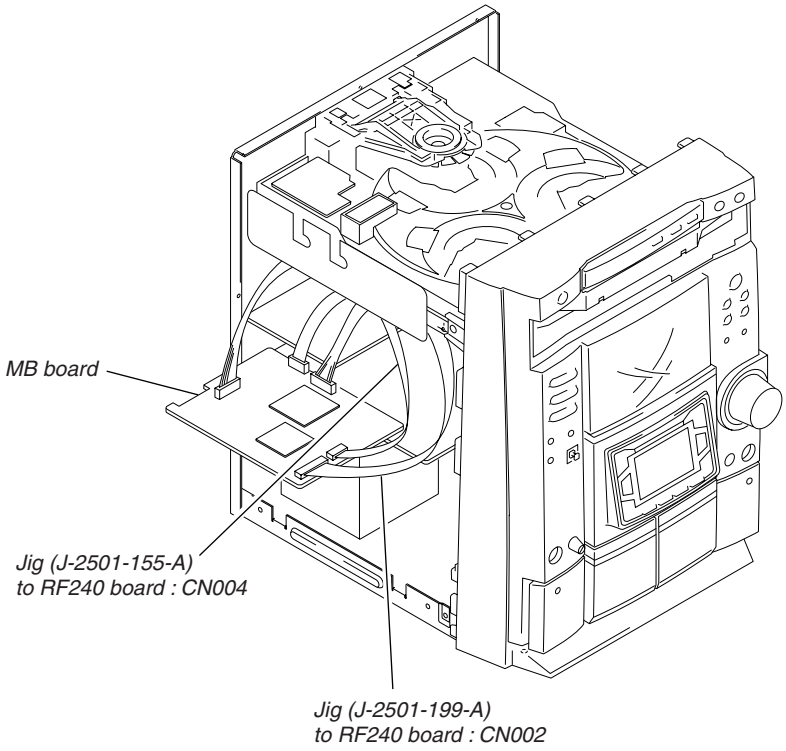
6-1. Circuit Board Location ····· 22
6-2. Block Diagrams ····· 23
6-3. Printed Wiring Board RF-240 Section ····· 26
6-4. Schematic Diagram RF-240 Section ····· 27
6-5. Printed Wiring Board MB Section ····· 28
6-6. Schematic Diagram MB Section (1/5) ····· 30
6-7. Schematic Diagram MB Section (2/5) ····· 31
6-8. Schematic Diagram MB Section (3/5) ····· 32
6-9. Schematic Diagram MB Section (4/5) ····· 33
6-10.Schematic Diagram MB Section (5/5) ····· 34
6-11. Schematic Diagram Driver Section ····· 35
6-12. Printed Wiring Board Driver Section ····· 35
6-13.Printed Wiring Board Main Section ····· 36
6-14.Schematic Diagram Main Section (1/3) ····· 37
6-15.Schematic Diagram Main Section (2/3) ····· 38
6-16.Schematic Diagram Main Section (3/3) ····· 39
6-17.Printed Wiring Board DSP Section ····· 40
6-18. Schematic Diagram DSP Section (1/2) ····· 41
6-19. Schematic Diagram DSP Section (2/2) ····· 42
6-20. Printed Wiring Board OPT/VIDEO Section ····· 43
6-21. Schematic Diagram OPT/VIDEO Section ····· 43
6-22. Printed Wiring Board Front Amp Section ····· 44
6-23. Schematic Diagram Front Amp Section ····· 45
6-24. Schematic Diagram Surround Amp Section ····· 46
6-25. Printed Wiring Board Surround Amp Section ····· 47
6-26. Printed Wiring Board Panel Section ····· 48
6-27. Schematic Diagram Panel Section (1/2) ····· 49
6-28. Schematic Diagram Panel Section (2/2) ····· 50
6-29. Printed Wiring Board Leaf SW Section ····· 51
6-30. Schematic Diagram Leaf SW Section ····· 51
6-31. Printed Wiring Board Trans Section ····· 52
6-32. Schematic Diagram Trans Section ····· 53
6-33. IC Pin Function Description ····· 54
6-34. IC Block Diagrams ····· 61

7. EXPLODED VIEWS

7-1. Main Section ····· 65
7-2. Front Panel Section ····· 66
7-3. Chassis Section ····· 67
7-4. Tape Mechanism Deck Section-1 (TCM-230MWR41) 68
7-5. Tape Mechanism Deck Section-2 (TCM-230AWR41) 69
7-6. DVD Mechanism Deck Section (CDM58D-DVBU9) · 70

8. ELECTRICAL PARTS LIST ····· 71

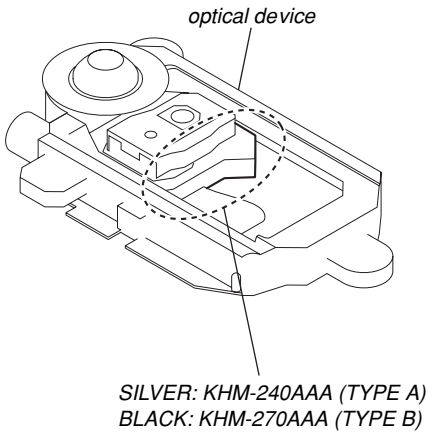
SERVICE POSITION



CHANGE OF OPTICAL PICK-UP

Optical Pick-up has been replaced from KHM-240AAA (TYPE A) to KHM-270AAA (TYPE B) from the middle of production.
In parallel with that, certain parts of MB board have been changed.

TYPE A/B DISCRIMINATION



PARTS LIST OF EACH MODEL

MB BOARD

REF	TYPE A				TYPE B			
	KHM-240AAA				KHM-270AAA			
R076	1-216-837-11 METAL CHIP	22K	5%	1/10W	No Mount			
R077	1-216-815-11 METAL CHIP	330	5%	1/10W	1-216-833-11 METAL CHIP	10K	5%	1/10W
R079	1-216-801-11 METAL CHIP	22	5%	1/10W	1-216-845-11 METAL CHIP	100K	5%	1/10W

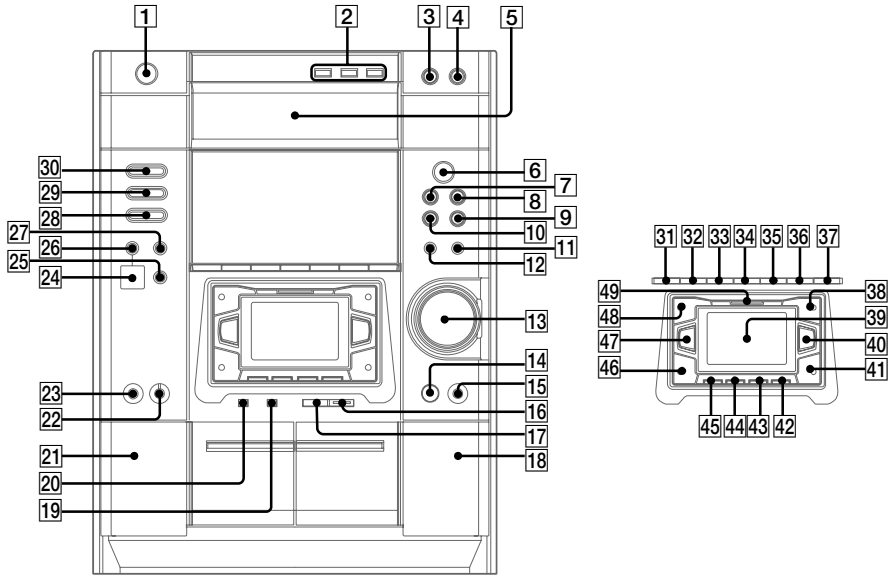
SECTION 1
GENERAL

This section is extracted from instruction manual.

Parts Identification

The items are arranged in alphabetical order.

Main unit



2CH/MULTI 42 (24, 46)
CD SYNC HI-DUB 17 (43, 44)
CLOCK/TIMER SET 33 (15, 45, 51)
DECK A ⏏ 21 (42)
DECK B ⏏ 18 (42)
digipad 39 (9, 24, 40, 47)
DIGITAL 26 (52)
DIGITAL IN (OPTICAL) jack 24 (52)
DIRECTION 35 (42–44, 50)
DISC 1–3 2 (23, 24)
DISC SKIP EX-CHANGE 3 (23, 24)
Disc tray 5 (23)
DISPLAY 31 (16, 29, 30)
DOLBY NR 36 (42–44)
DSP EDIT 47 (47)
DVD 30 (12, 25, 26, 34, 43, 44)
DVD DISPLAY 35 (17, 28, 30)
DVD MENU 19 (25)
EFFECT 43 (47)
ENTER 40 (14, 15, 25–27, 31, 32, 34–41, 44, 45, 47, 51)
FM MODE 36 (41)
GAME 25 (52)
GAME MODE 46 (47)
GROOVE 44 (46)
IR receptor 14
KARAOKE PON (Except for North American and European models) 32 (49)
MD (VIDEO) 27 (52)
MIC jack (Except for North American and European models) 23 (49)
MIC LEVEL control (Except for North American and European models) 22 (49)
MOVIE MODE 38 (47)
MULTI CHANNEL DECODING indicator 49 (46)
MUSIC MODE 48 (47)
P FILE 45 (48)
PHONES jack 15
PLAY MODE 37 (23, 26, 27, 44)
PTY (European model only) 35 (41)
REC PAUSE/START 16 (43, 44, 50)
REPEAT 36 (28, 29)
SPECTRUM (North American and European models only) 32 (49)
TAPE A/B 28 (42, 43)
TIMER SELECT 34 (45, 51)
TITLE 20 (25)
TOOL MODE 41 (47)
TUNER/BAND 29 (40)
TUNER MEMORY 37 (40)
VOLUME control 13

BUTTON DESCRIPTIONS

I/⏻ (power) 1
⏏ OPEN/CLOSE (disc tray) 4
◄► (play) 6
II (pause) 7
■ (stop) 8
I◄◄ (go back) 10
►►I (go forward) 9
◄◄/– (rewind) 12
►►/+ (fast forward) 11

Setting the time

1 **Turn on the system.**

2 **Press CLOCK/TIMER SET.**
When you set the time for the first time, proceed to step 5.

3 **Press I◄◄ or ►►I repeatedly to select "CLOCK SET".**

4 **Press ENTER.**

5 **Press I◄◄ or ►►I repeatedly to set the hour.**

6 **Press ENTER.**

7 **Press I◄◄ or ►►I repeatedly to set the minutes.**

8 **Press ENTER.**

Tip
If you have made a mistake or want to change the time, start over from step 2.

Note
The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

SECTION 2
DISASSEMBLY

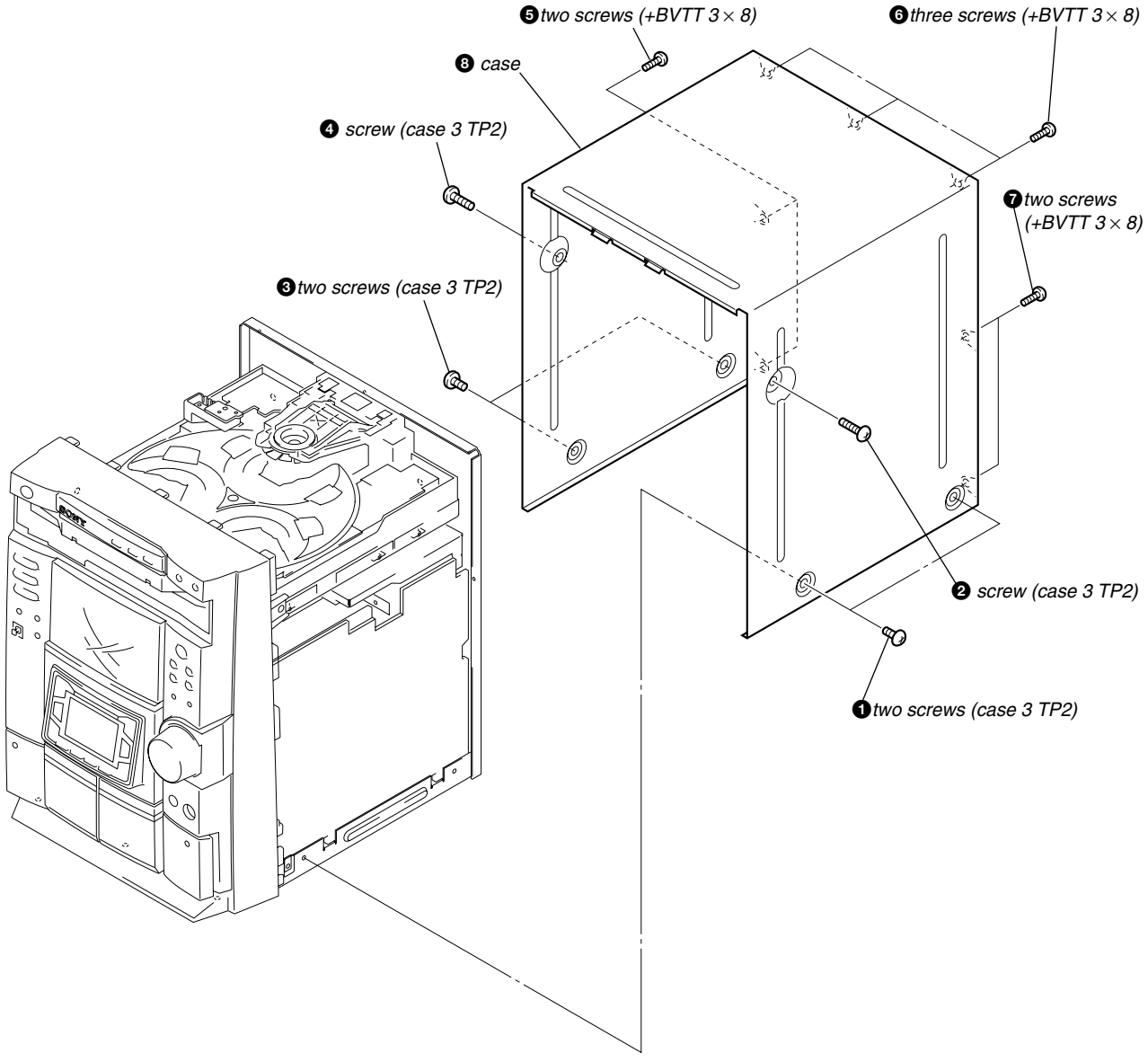
• The equipment can be removed using the following procedure.

Set → Case (Top) → Loading Panel → Front Panel Section

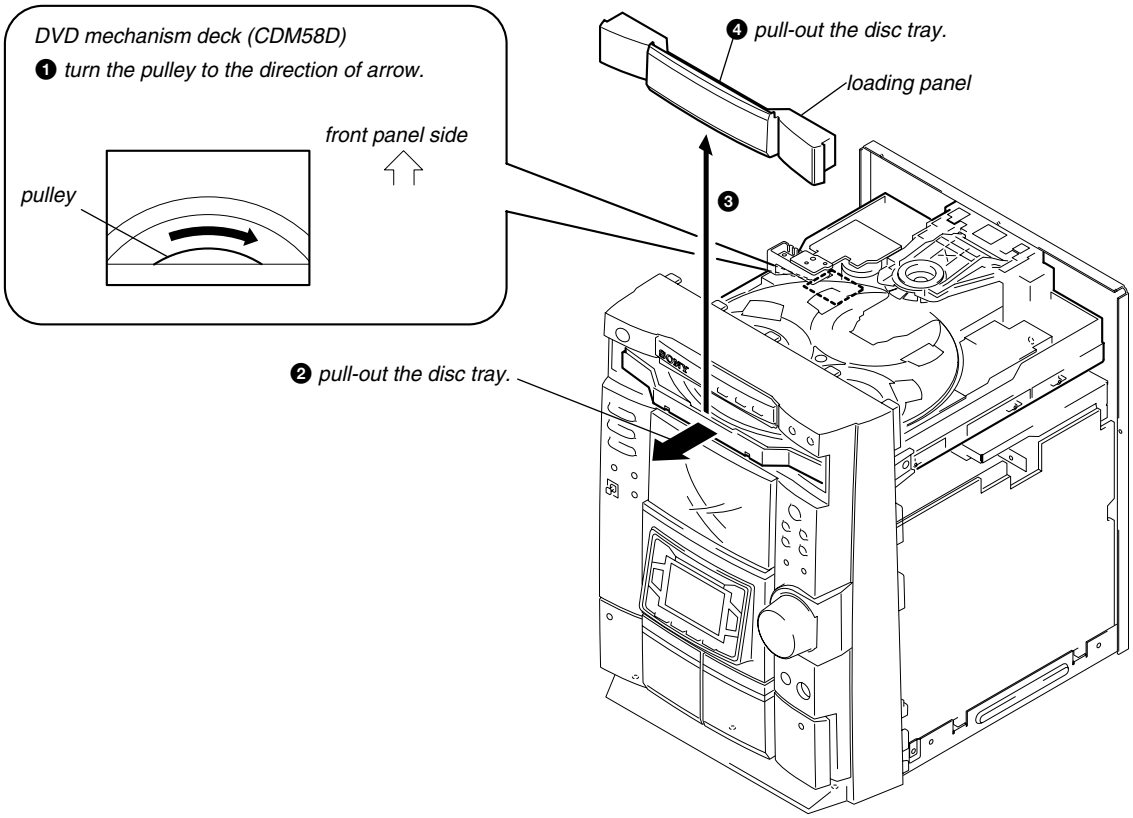
- → Tape Mechanism Deck (TCM-230AWR41/MWR41) → LEAF SW board, Head (A) board, Head (B) board
- → CD Panel board, Panel board, OPT IN Board → Escutcheon pad (With touch pad)
- → Chassis section → SUB Trans board, Back panel, Fan
  - → Tnans board, Main board → Front AMP board, Surround AMP board
- → DVD mechanism deck (CDM58D) → DSP board, MB board, VIDEO board → RF-240 board, optical pick-up (KHM-240AAA)
  - → Driver board, Motor board, Diode board, Sensor board, Tray, Sensor board

Note : Follow the disassembly procedure in the numerical order given.

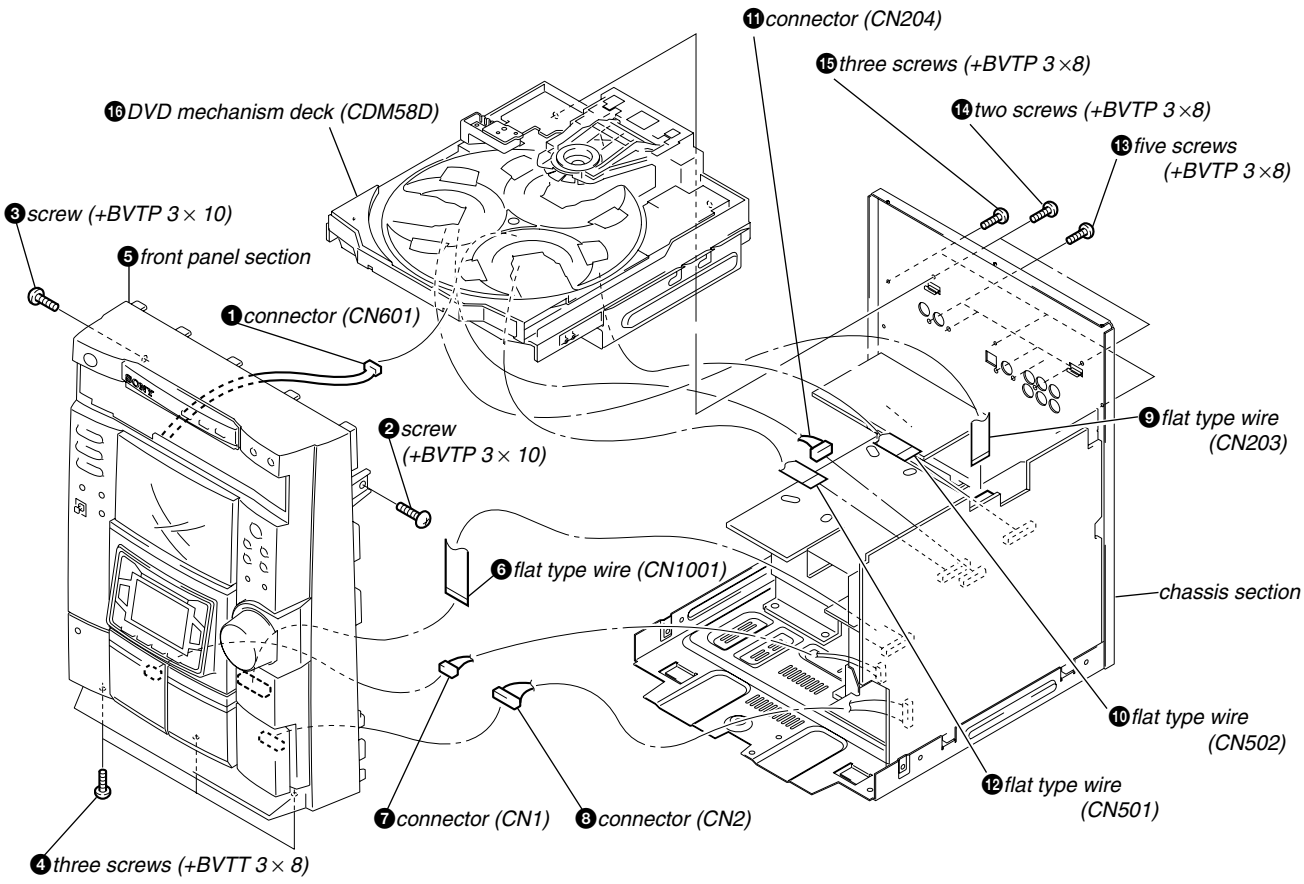
2-1. CASE (TOP)


❺two screws (+BVTT 3× 8)
❻three screws (+BVTT 3× 8)
❽ case
❹ screw (case 3 TP2)
❼two screws (+BVTT 3× 8)
❸two screws (case 3 TP2)
❷ screw (case 3 TP2)
❶two screws (case 3 TP2)

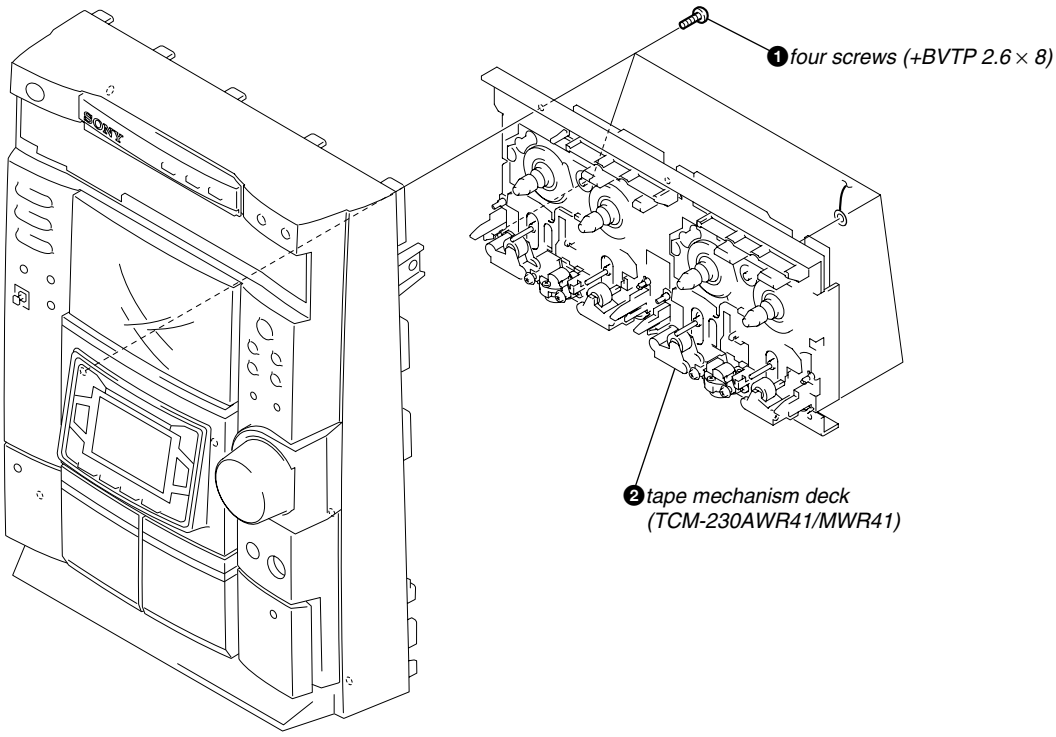
2-2. LOADING PANEL



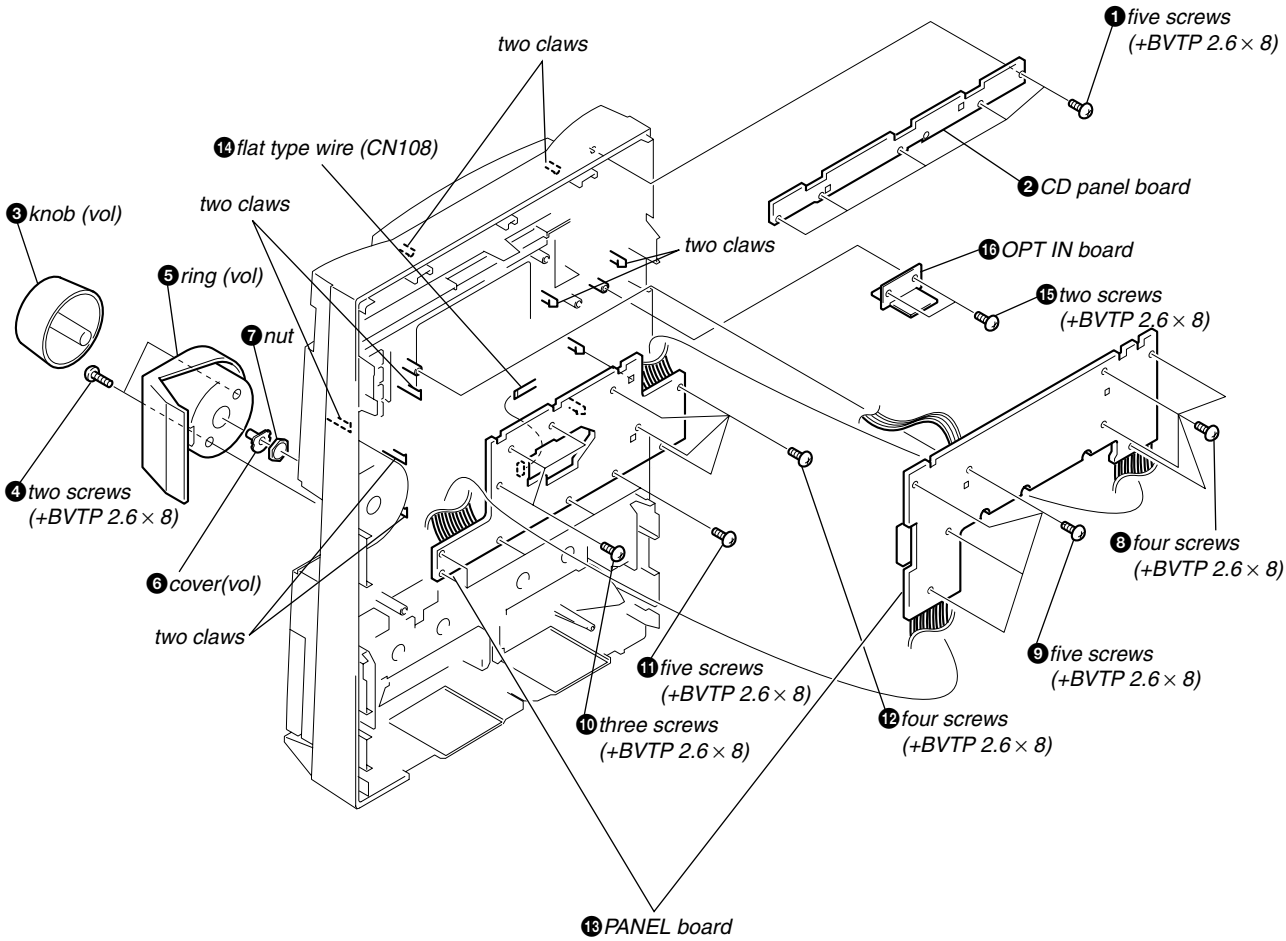
2-3. FRONT PANEL SECTION, DVD MECHANISM DECK (CDM58D)



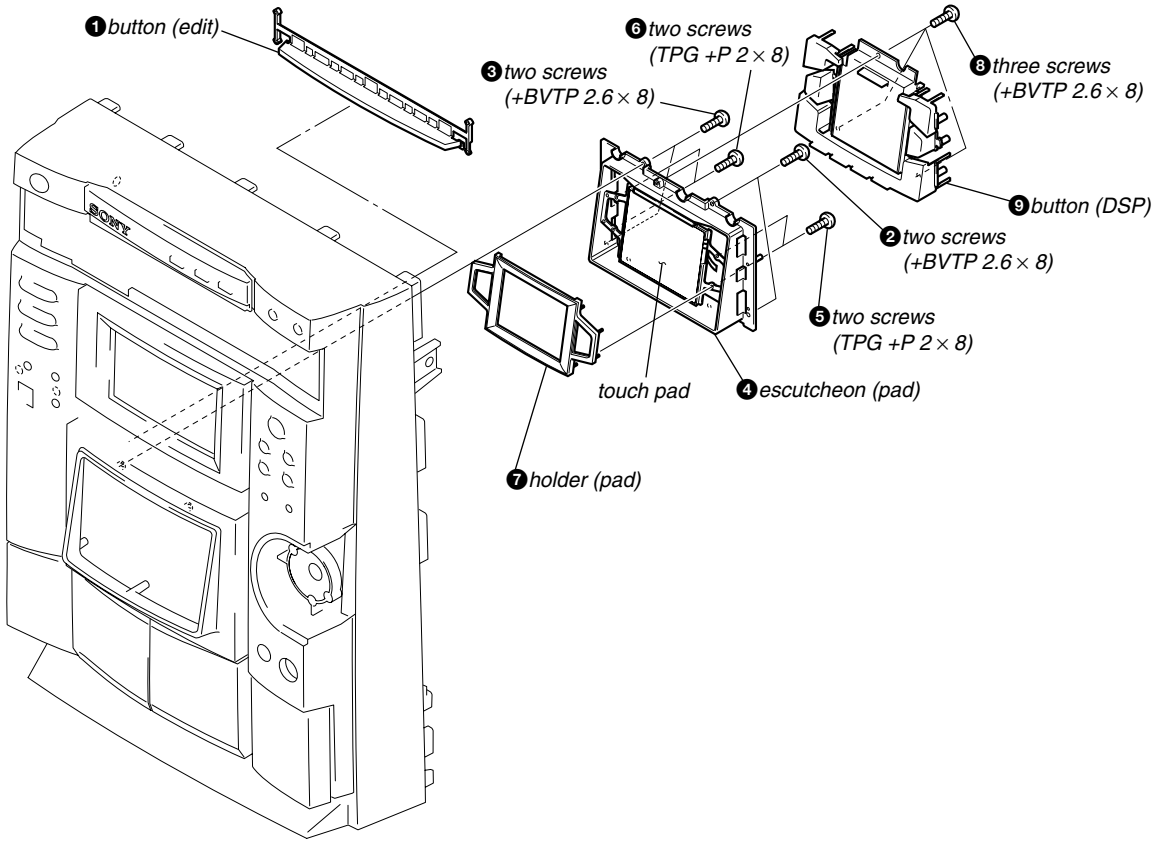
2-4. TAPE MECHANISM DECK (TCM-230AWR41/MWR41)



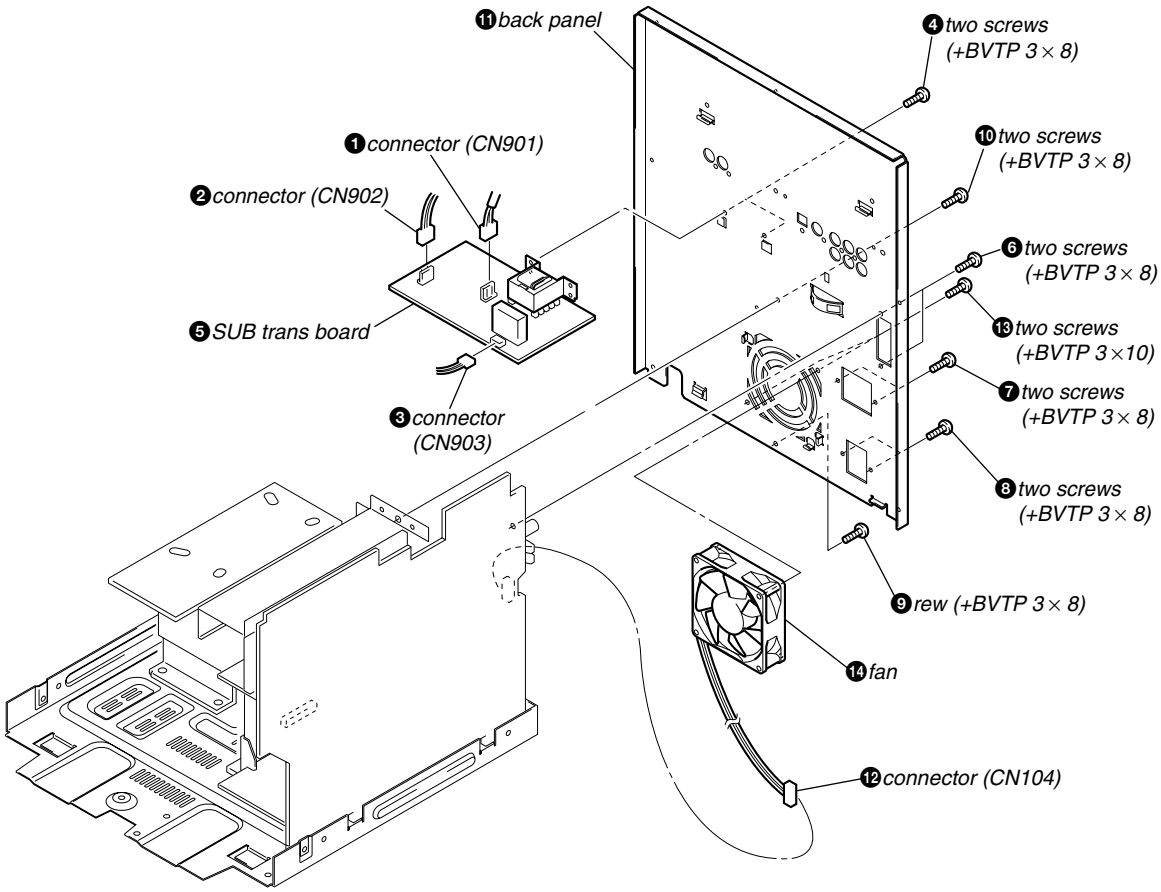
2-5. CD PANEL BOARD, PANEL BOARD, OPT IN BOARD



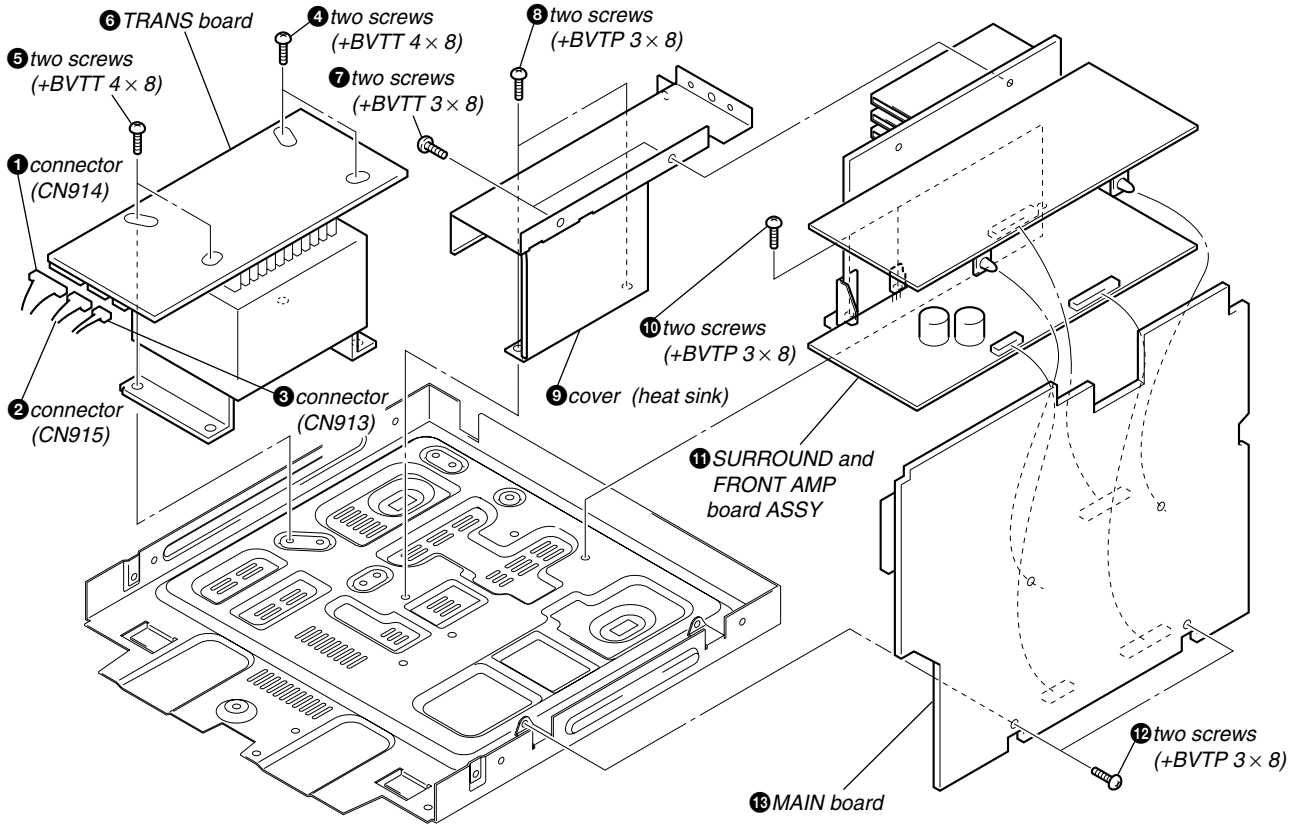
2-6. ESCUTCHEON PAD (WITH TOUCH PAD)



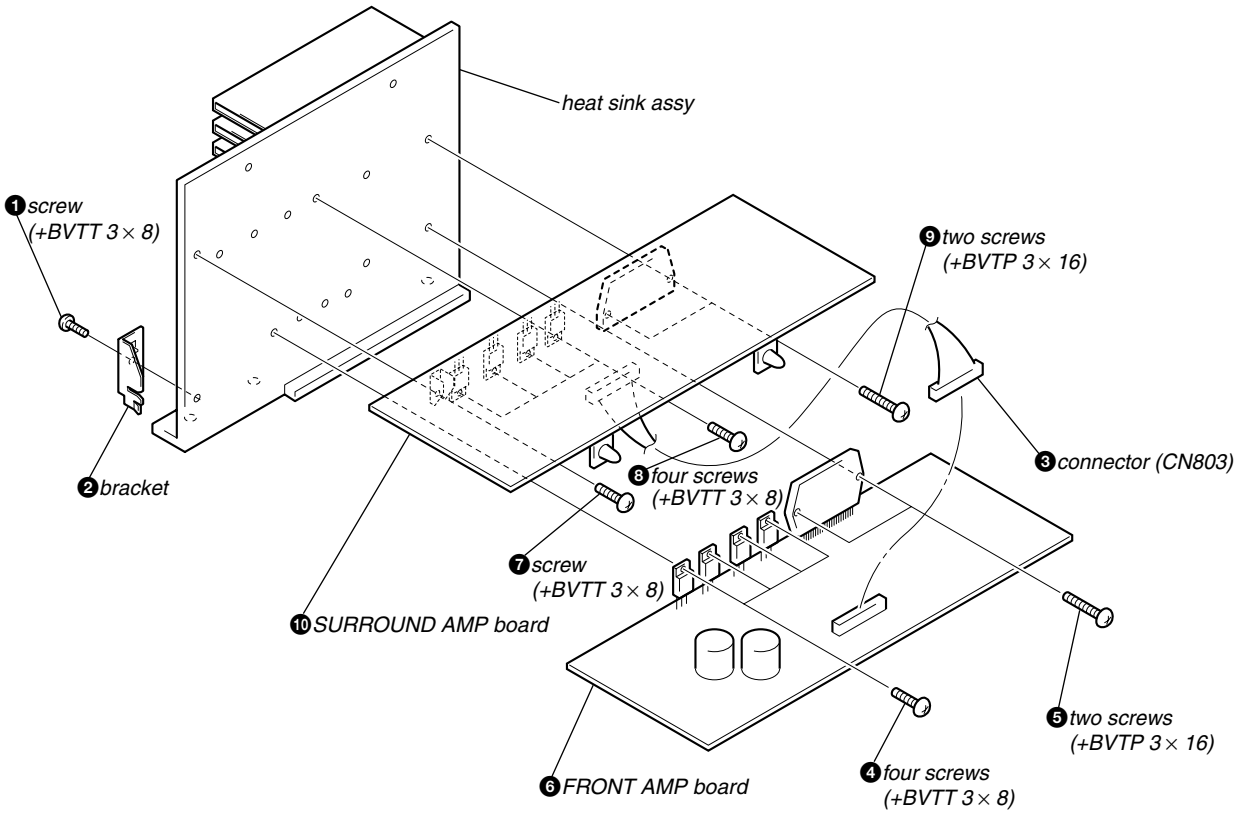
2-7. SUB TRANS BOARD, BACK PANEL, FAN



2-8. TRANS BOARD, MAIN BOARD

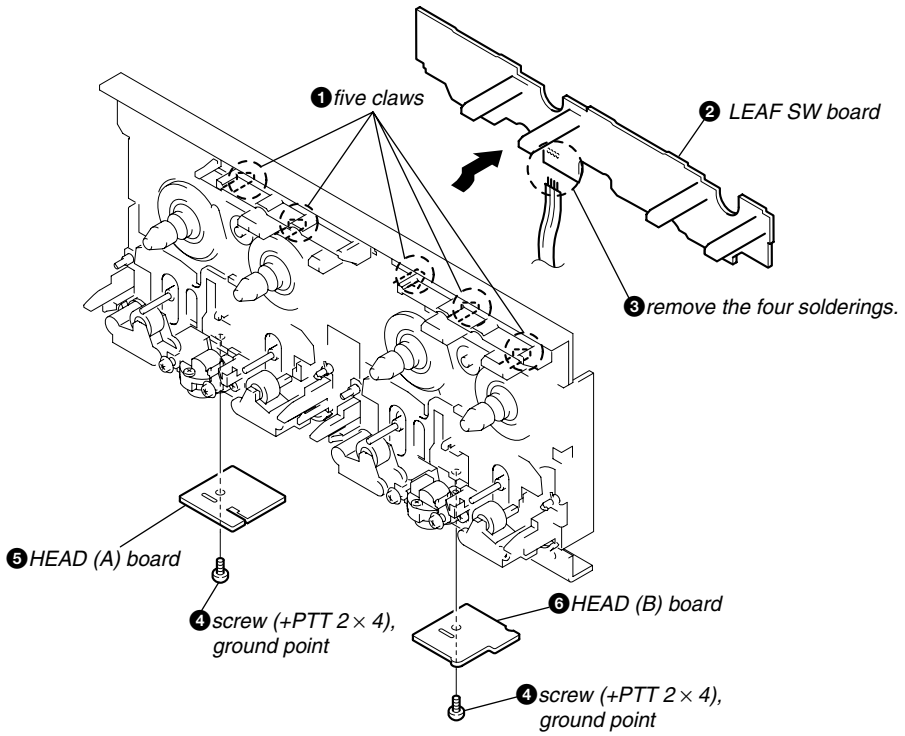

6 TRANS board
4 two screws (+BVTT 4× 8)
8 two screws (+BVTP 3× 8)
5 two screws (+BVTT 4× 8)
7 two screws (+BVTT 3× 8)
1 connector (CN914)
10 two screws (+BVTP 3× 8)
2 connector (CN915)
3 connector (CN913)
9 cover (heat sink)
11 SURROUND and FRONT AMP board ASSY
12 two screws (+BVTP 3× 8)
13 MAIN board

2-9. FRONT AMP BOARD, SURROUND AMP BOARD

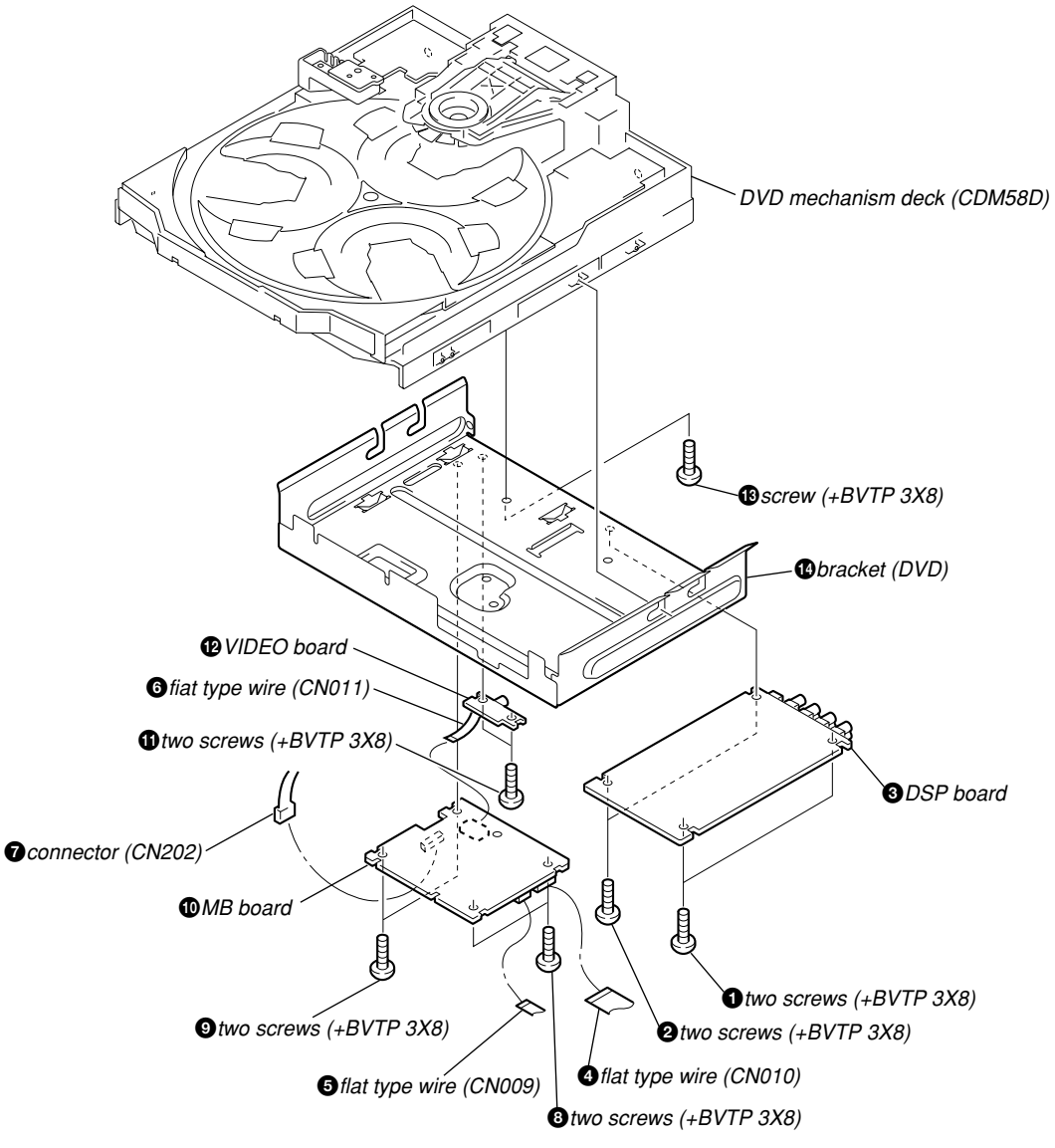

heat sink assy
1 screw (+BVTT 3× 8)
9 two screws (+BVTP 3× 16)
2 bracket
3 connector (CN803)
8 four screws (+BVTT 3× 8)
7 screw (+BVTT 3× 8)
10 SURROUND AMP board
5 two screws (+BVTP 3× 16)
6 FRONT AMP board
4 four screws (+BVTT 3× 8)

2-10. LEAF SW BOARD, HEAD (A) BOARD, HEAD (B) BOARD (TCM-230AWR41/MWR41)

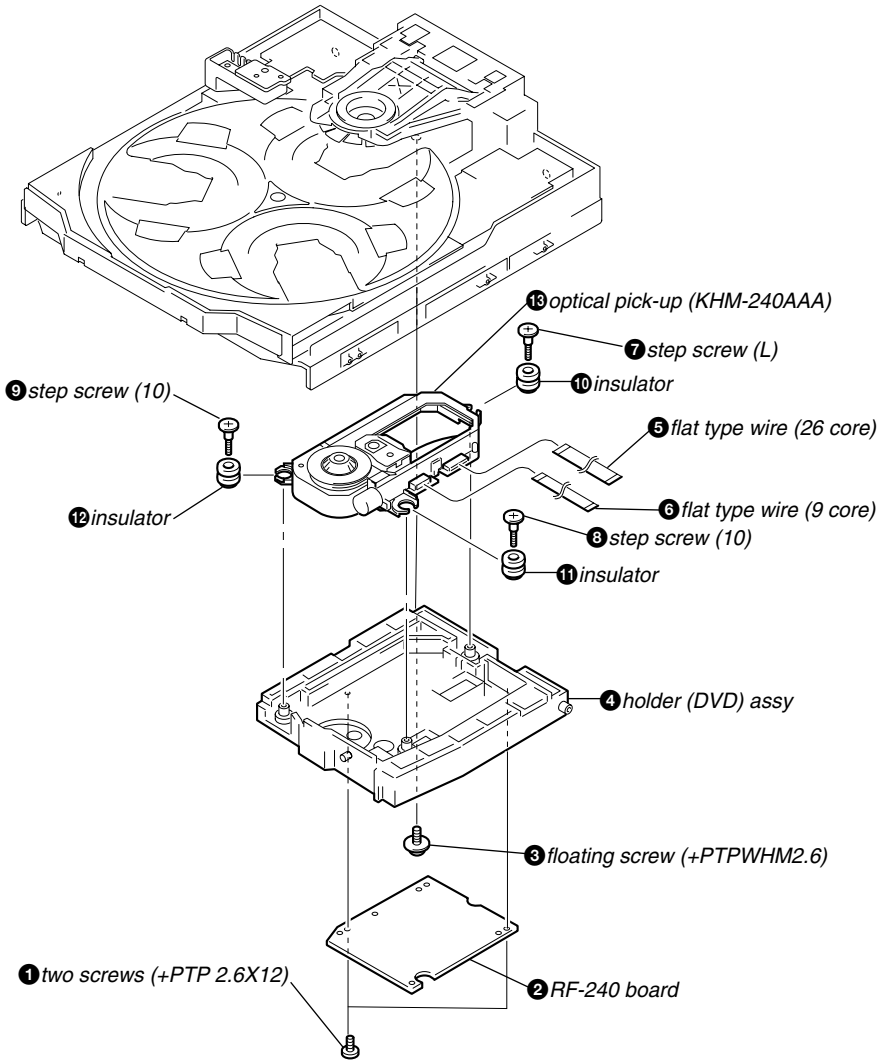
Note: This illustration is for TCM-230MWR, but in case of TCM-230AWR, you can remove them in the same way.


❶ five claws
❷ LEAF SW board
❸ remove the four solderings.
❺ HEAD (A) board
❹ screw (+PTT 2 × 4), ground point
❻ HEAD (B) board
❹ screw (+PTT 2 × 4), ground point

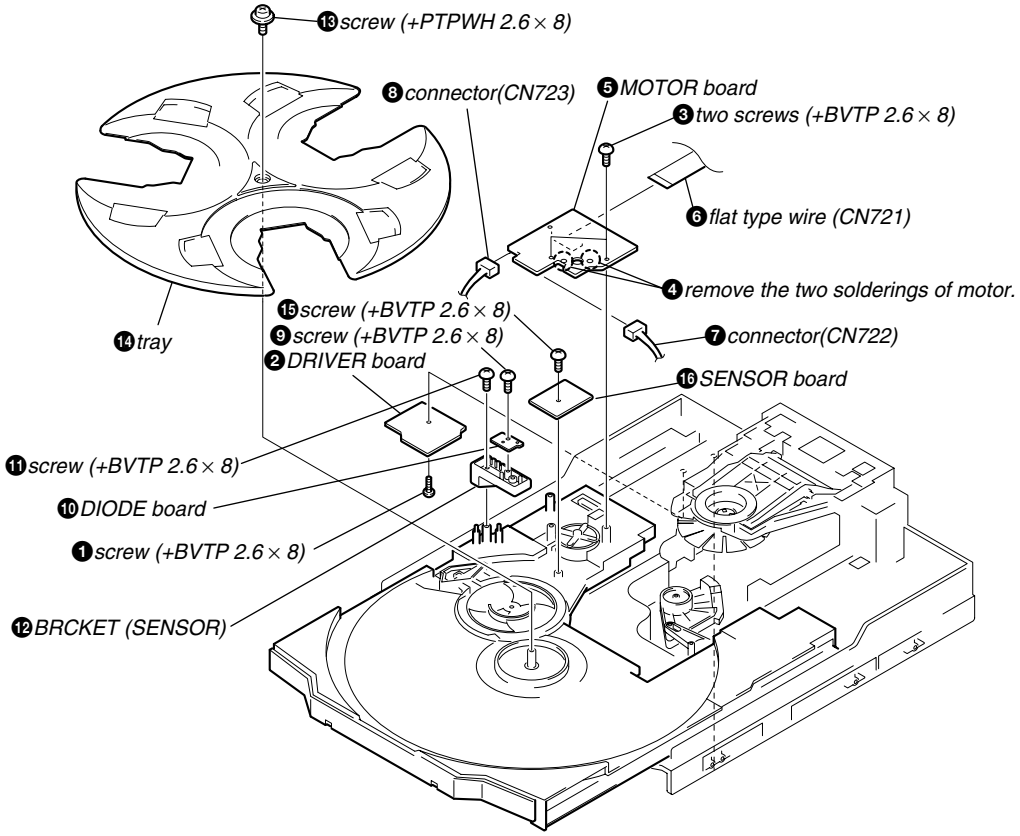
2-11. BASE UNIT, DSP BOARD, MB BOARD, VIDEO BOARD


DVD mechanism deck (CDM58D)
⓭ screw (+BVTP 3X8)
⓮ bracket (DVD)
⓬ VIDEO board
❻ flat type wire (CN011)
⓫ two screws (+BVTP 3X8)
❸ DSP board
❼ connector (CN202)
⓾ MB board
❶ two screws (+BVTP 3X8)
❾ two screws (+BVTP 3X8)
❷ two screws (+BVTP 3X8)
❺ flat type wire (CN009)
❹ flat type wire (CN010)
❽ two screws (+BVTP 3X8)

2-12. RF-240 BOARD, OPTICAL PICK-UP (KHM-240AAA)



2-13. DRIVER BOARD, MOTOR BOARD, DIODE BOARD, TRAY, SENSOR BOARD


⓭ screw (+PTPWH 2.6 × 8)
❽ connector(CN723)
❺ MOTOR board
❸ two screws (+BVTP 2.6 × 8)
❻ flat type wire (CN721)
❹ remove the two solderings of motor.
⓯ screw (+BVTP 2.6 × 8)
❾ screw (+BVTP 2.6 × 8)
❼ connector(CN722)
⓮ tray
❷ DRIVER board
⓰ SENSOR board
⓫ screw (+BVTP 2.6 × 8)
❿ DIODE board
❶ screw (+BVTP 2.6 × 8)
⓬ BRCKET (SENSOR)

SECTION 3
TEST MODE

[Cold Reset]

- The cold reset clears all data including preset data stored in the RAM to initial conditions. Execute this mode when returning the set to the customer.

Procedure:

1. Press three buttons [■] , [DISPLAY] , and [DISC 1] simultaneously.
2. The fluorescent indicator tube becomes blank instantaneously, and the set is reset.

[Tuner Step Change] (Except for European and Middle Eastern models)

- A step of AM channels can be changed over between 9 kHz and 10 kHz.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Select the function "TUNER", and press [TUNER/BAND] button to select the BAND "AM".
3. Press [I/⏻] button to turn the set OFF.
4. Press [ENTER] and [I/⏻] buttons simultaneously, and the display of fluorescent indicator tube changes to "AM 9 k STEP" or "AM 10 k STEP", and thus the channel step is changed over.

[MD/VIDEO Function Change]

- Change of function MD or VIDEO (also the input level changes).

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press [MD (VIDEO)] and [I/⏻] buttons simultaneously, and the display of fluorescent indicator tube changes to "MD" or "VIDEO", and thus the channel step is changed over.
3. Press [I/⏻] button to turn the set OFF.

[GC Test Mode]

- This mode is used to check the software version, FL tube, LED, keyboard and VACS.

Procedure:

1. Press three buttons [■] , [DISPLAY] , and [DISC 2] simultaneously.
2. LEDs and fluorescent indicator tube are all turned on.
3. When you want to enter the software version display mode, press [DISC 1].The model number and destination are displayed.
4. Each time [DISC 1] is pressed, the display changes stating from MC version, GC version, DVD version, CDDM, CDMA, CDMB, BDA, BDB version, ST version, TA version, TM version, TC version, in this order, and returns to the model number and destination display.
5. When [DISC 3] is pressed while the version numbers are being displayed except model number and destination, year, month and day of the software creation appear. When [DISC 3] is pressed again, the display returns to the software version display. When [DISC 1] is pressed while year, month and day of the software creation are being displayed, the year, month and day of creation of the software versions are displayed in the same order of version display.
6. Press [DISC 2] button, and the key check mode is activated.
7. In the key check mode, the fluorescent indicator tube displays "KOJOVO". Each time a button is pressed, "KEY" value increases.
   However, once a button is pressed, _it is no longer taken into account.
   "VOL" value increases like 1, 2, 3...if rotating VOLUME knob in "+" direction, or it decreases like 0, 9, 8...if rotating in "_"direction.
8. Also when [DISC 3] is pressed after lighting of all LEDs and FL tubes, value of VACS appears.
9. To exit from this mode, press three buttons in the same manner as step 1, or disconnect the power cord.

[MC Test Mode]

- This mode is used to check operations of the respective sections of Amplifier, Tuner, and Tape.

Procedure:

- To enter MC Test Mode

1. Press [I/⏻] button to turn on the set.
2. Press the three buttons of [■] , [DISPLAY] and [DISC 3] simultaneously.
3. Cursor segment flash on the FL display tube. The input FUNCTION is changed to GAME.

* Check of Amplifier

Initial settings: Input ➡ GAME
EQ ➡ FLAT
Mode ➡ MUSIC
VA CS ➡ OFF

Output channel switching:

MUSIC key: L ➡ L R ➡ R through
MOVIE key: L ➡ SL R ➡ SR through
GAME key:L ➡ L, SL, C R ➡ R, SR, SW through
TOOL MODE key: L ➡ C R ➡ SW through

1. When [VOLUME] control knob is turned clockwise even slightly, the sound volume increases to is maximum and a message "VOLUME MAX" appears for two seconds, then the display returns to the original display.
2. When [VOLUME] control knob is tuned counter-clockwise even slightly, the sound volume decreases to its minimum and a message "VOLUME MIN" appears for two seconds, then the display returns to the original display.

* Tuner function

1. In the test mode, the default-preset channel is called even when the TUNER is selected and an attempt is made to call the preset channel that has been stored in memory. (It means that the memory is cleared.)
2. The minimum, center and maximum frequency of each band is set then.

* Tape recording test

1. To enter the MC Test Mode.
2. Load tapes in both tape decks A and B.
3. Press the REC button to start recording.
4. Pressing [▶▶] ,[◀◀] buttons during recording returns the tape to the recording start position and stops it at this position.
5. Pressing the "High Speed Dubbing" key while playing back the tape of deck B switches the playback speed between "Normal Speed" and "High Speed".

Note:

When the playback direction of the tape is set to other than "ONY WAY", the restriction on the number of times playback which can be repeated will be cleared.

* AMS Test Mode

1. Set TAPE function
2. Select the desired loop by pressing [PLAY MODE] button. Insert a test tape AMS-110A or AMS-120 to Deck A.
3. Press [SPECTRUM] or [KARAOKE PON] button to enter the AMS test mode.
4. After a tape is rewound first, the FF AMS is checked, and the mechanism is shut off after detecting the AMS signal the AMS signal twice.
5. Then the REW AMS is checked and the mechanism is shut off after detecting the AMS signal twice.
6. When the check is complete, a message of either OK or NG appears.

* To return to normal mode again.

1. When you want to exit this mode, press [I/⏻] button.
2. The cold reset is enforced at the same time.

[Aging Mode]

This mode can for operation check of tape deck section and DVD section.

- If an error occurred:

The aging operation stops and display then status.

- If no error occurs:

The aging operation continues repeatedly.

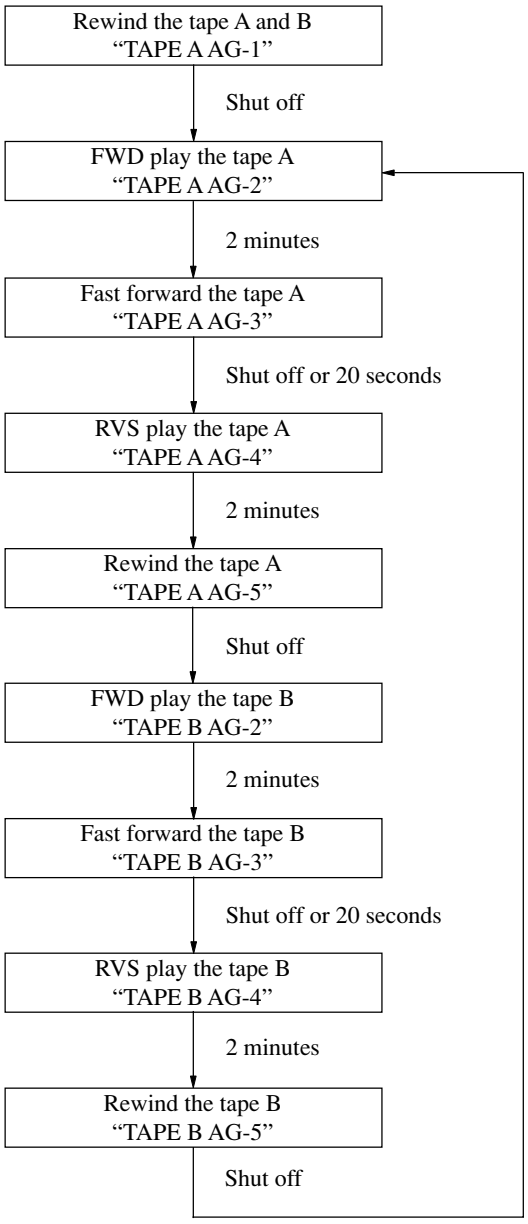
Procedure:

1. Press the DVD button to select the function "DVD".
2. Load the tapes into the decks A and B respectively.
3. Set a disk in "DISK1" tray.
4. Press the PLAY MODE button to set the "ALL DISCS" mode, and press the REPEAT button to "REPEAT" off.
5. Press three buttons of ■, ENTER, and DISC SKIP/EX-CHANGE simultaneously.
6. The aging mode is activated, if the indicator of DOLBY NR is blinking.
7. To exit from the aging mode, operate the cold reset.

[Tape Deck Section]

- The sequence during the aging mode is following as below.
- If an error occurred, stop display that step.

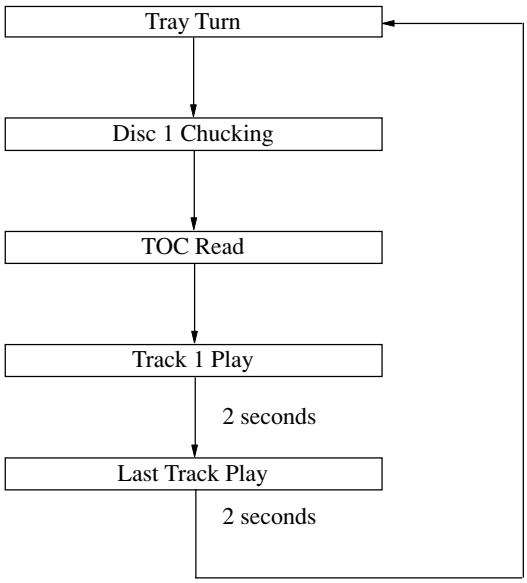
Aging mode sequence (Tape deck section):



[DVD Section]

- The sequence during the aging mode is following as below.

Aging mode sequence (DVD section):



Error History Display

1. BD Error History Display

11 digits are displayed after the D character.

Example of display : D00209010100

1st digit : Indicates the error history number.
0 is the latest error

2nd to 3rd digits : Indicates details of the problem.
- 01 : Cannot focus
- 02 : GFS NG
- 03 : Start time over
- 04 : Focus deviates continuously
- 05 : Q code absent for some time

4th to 5th digits : Processing when problems occur
- 01 : Currently SHIP processing
- 02 : Currently POWER OFF processing
- 03 : Currently initializing
- 04 : Currently stopping
- 05 : Currently STOP operation processing
- 06 : Currently start processing
- 07 : Currently TOC reading
- 08 : Currently searching
- 09 : Currently playing
- 0A : Currently pausing
- 0B : Currently PLAY manual searching
- 0C : Currently PAUSE manual searching

6th to 7th digits : Operations currently performed for problems which have occurred

8th to 9th digits : Rotation speed of DISC when problems occur
- 01 : x1 speed
- 02 : x2 speed

10th to 11th digits : Fixed at 00

2. CDM Error History <CDM58D Error History Display>

11 digits are displayed after the M character.

Example of display : M0FF400220000

1st digit : Indicates the error history number.
0 is the latest error

2nd to 3rd digits : Indicates the details of the problem.
- 01 : Initialization table is currently rotating 1
- 02 : Initialization table is currently rotating 2
- 03 : Initialization table is currently rotating 3
- 04 : Currently DISC SKIP in OPEN mode
- 05 : CLOSE table is currently rotating
- 06 : Chucking table is currently rotating
- 07 : Currently performing SHIP operations
- 08 : Currently performing release operations
- 09 : Currently performing POWER OFF operations

4th to 5th digits : Processing when problems occur
- 01 : Currently performing SHIP operations
- 02 : Currently performing POWER OFF operations
- 03 : Currently initializing
- 04 : Currently performing release operations
- 05 : Currently in chuck stop state
- 06 : Currently performing CLOSE operations
- 07 : Currently performing exchange CLOSE operations
- 08 : Currently performing OPEN operations
- 09 : Currently performing OPEN POP UP operations
- 0A: Currently performing exchange OPEN operations

6 to 7th digits : Operations currently performed for problems which have occurred

8th to 9th digits : Targets of processing when problems occur
Same as 4th to 5th digits

10th to 11th digits : Fixed at 00

[DVD and CD Ship Mode (No Memory Clear)]

- This mode moves the position to the position durable to vibration Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press three [DVD] button and [I/⏻] button simultaneously.
3. After the "STANBY" display blinks six times, a message "LOCK" is displayed on the fluorescent indicator rube, and the DVD ship mode is set.

[DVD and CD Ship Mode (Memory Clear)]

- This mode moves the pickup to the position durable to vibration. Use this mode when returning the set to the customer after repair.

Procedure:

1. Press [I/⏻] button to turn the set ON.
2. Press three buttons [ENTER], [DISC 1], and [DVD] button simultaneously.
3. After the "STANDBY" display blinks six times, a message "LOCK" is displayed on the fluorescent indicator tube, and the DVD ship mode is set.

SECTION 4
MECHANICAL ADJUSTMENTS

[VACS ON/OFF MODE]

• This mode is used to switch ON and OFF the VACS (Variable Attenuation Control System).

Procedure:

Press the three buttons [■] , [ENTER] and [SPECTRUM] or [KARAOK PON] simultaneously.

[REPEAT 5 LIMIT OFF MODE]

• This mode is used to enable infinite repetitions.
Normally, the number of repetitions allowed is 5.

Procedure:

1. Press [I/⏻] button to turn ON the power supply.
2. Set the function "DVD".
3. Press three burtons [ENTER], [DISC 3], and [■] is simultaneously.
4. Infinite repetitions is enabled.
5. This state is maintained (memorized) until COLD RESET is executed.

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
   record/playback heads — pinch rollers
   erase head — rubber belts
   capstan — idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Mode	Torque meter	Meter reading
FWD	CQ-102C	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
FWD back tension	CQ-102C	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
REV	CQ-102RC	3.06 N • m to 6.96 N • m 31 to 71 g • cm (0.43 – 0.98 oz • inch)
REV back tension	CQ-102RC	0.19 N • m to 0.58 N • m 2 to 6 g • cm (0.02 – 0.08 oz • inch)
FF/REW	CQ-201B	6.96 N • m to 14.02 N • m 71 to 143 g • cm (0.98 – 1.99 oz • inch)
FWD tension	CQ-403A	9.80 N • m 100 g or more (3.53 oz or more)
REV tension	CQ-403R	9.80 N • m 100 g or more (3.53 oz or more)

HCD-DP1000D
SECTION 5
ELECTRICAL ADJUSTMENTS

DECK SECTION | 0 dB=0.775 V

1. Demagnetize the record/playback head with a head demagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjust.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.
7. Switches and controls should be set as follows unless otherwise specified.

• Test Tape

Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment
P-4-L300	315 Hz, 0 dB	Level Adjustment

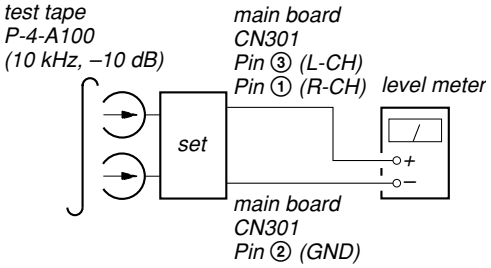
Record/Playback Head Azimuth Adjustment

DECK A **DECK B**

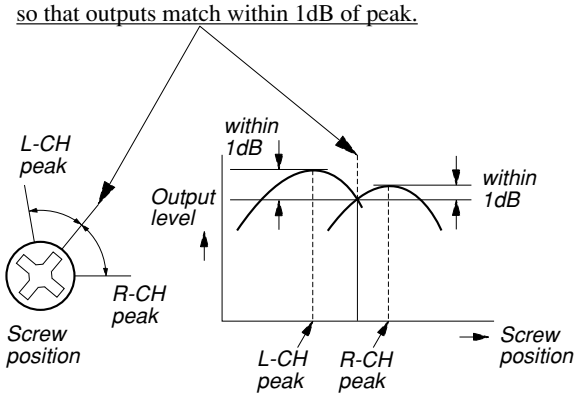
Note: Perform this adjustments for both decks

Procedure:

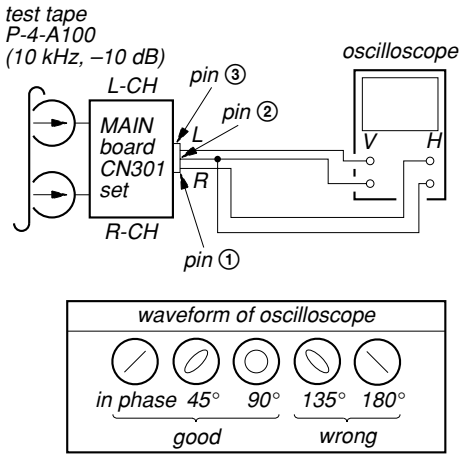
1. Mode: Playback



2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 1dB of peak.

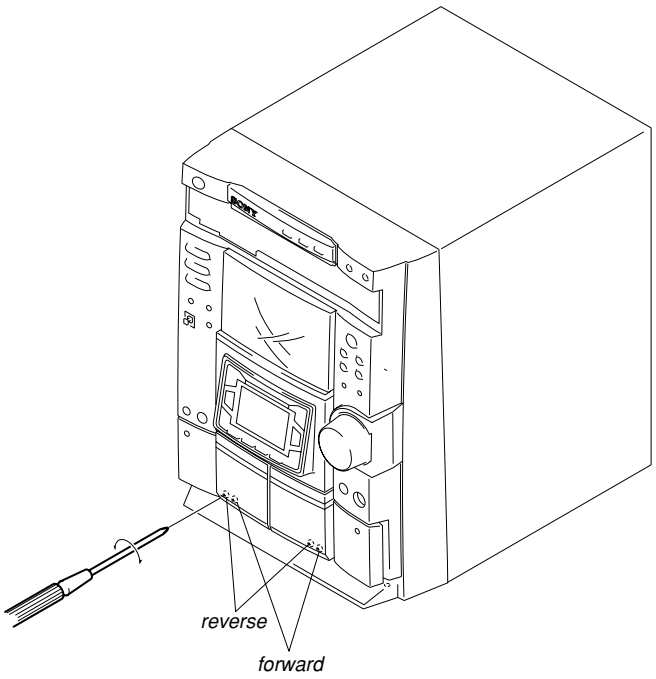


3. Mode: Playback



4. After the adjustments, apply suitable locking compound to the pats adjusted.

Adjustment Location: Playback Head (Deck A).
Record/Playback/Erase Head (Deck B).



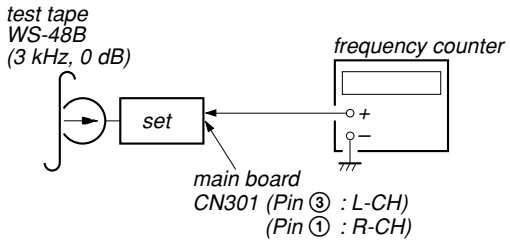
Tape Speed Adjustment DECK B

Note: Start the Tape Speed adjustment as below after setting to the test mode.
In the test mode, the tape speed is high during pressing the CD SYNC HI-DUB button.

Procedure:

1. Turn the power switch on.
2. Press the ■ button, DISPLAY button and DISC 3 button simultaneously.
   (Cursor segment flash on the FL display tube.)
   To exit from the test mode, press the I/⏻ button.

Mode: Playback



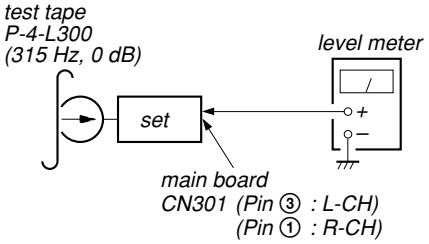
1. Insert the WS-48B into the deck B.
2. Press the ◀▶ button on the deck B.
3. Press the CD SYNC HI-DUB button in playback mode.
   Then at HIGH speed mode.
4. Adjust RV1001 on the LEAF SW board do that frequency counter reads 6,000 ± 180 Hz.
5. Press the CD SYNC HI-DUB button.
   Then back to NORMAL speed mode.
6. Adjust RV1002 on the LEAF SW board so that frequency counter reads 3,000 ± 90 Hz.

Adjustment Location: LEAF SW board

Playback level Adjustment DECK A DECK B

Procedure:

Mode: Playback



Deck A is RV302 (L-CH), Deck B is RV303 (L-CH) so that adjustment within adjustment level as follows.

Adjustment Level:

CN301 PB level: 334 to 375 mV (–6.8 dB ± 0.5 dB) level difference between the channels: within ±0.5 dB

Adjustment Location: MAIN board

Sample Volue of Wow and Flutter: 0.3% or less W. RMS
(WS-48B)

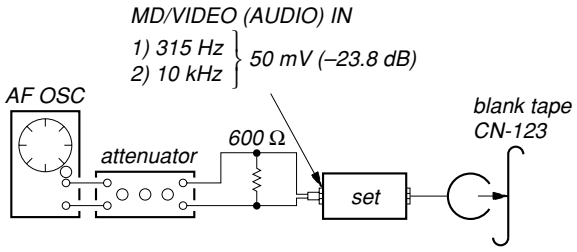
REC Bias Adjustment DECK B

Procedure:

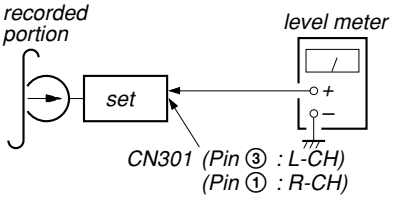
INTRODUCTION

When set to the test mode performed in Tape Speed Adjustment, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(If do not operation of stopped from recording complete, and rotette of shuttle knob then rewind to recording start position.)

1. Press MD (VIDEO) button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B.
3. After press REC PAUSE/START button, press REC PAUSE/START button, then recording start.
4. Mode: Record



5. Mode: Playback



6. Confirm playback the signal recorded in step 3 become adjustable level as follows.
   If these levels do not adjustable level, adjustment the RV304 (L-CH) and RV354 (R-CH) on the AUDIO board to repeat steps 4 and 5.

Adjustable level: Playback output of 315 Hz to playback output of 10 kHz: 0±0.5 dB

Adjustment Location: MAIN board

REC Level Adjustment DECK B

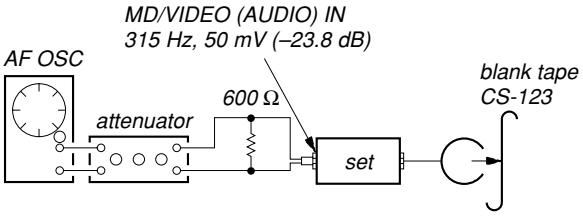
Procedure:

INTRODUCTION

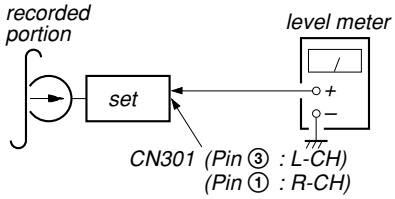
When set to the test mode performed in Tape Speed Adjustment, when the tape is rewound after recording, the "REC memory mode" which rewinds only the recorded portion and playback is set.
This "REC memory mode" is convenient for performing this adjustment. During recording, the input signal FUNCTION will automatically switch to VIDEO.
(If do not operation of stopped from recording complete, and rotate of shuttle knob then rewind to recording start position.)

1. Press MD (VIDEO) button to select VIDEO. (This step is not necessary if the above test mode has already been set.)
2. Insert a tape into deck B.
3. After press REC PAUSE/START button, press REC PAUSE/START button, then recording start.

4. Mode: Record



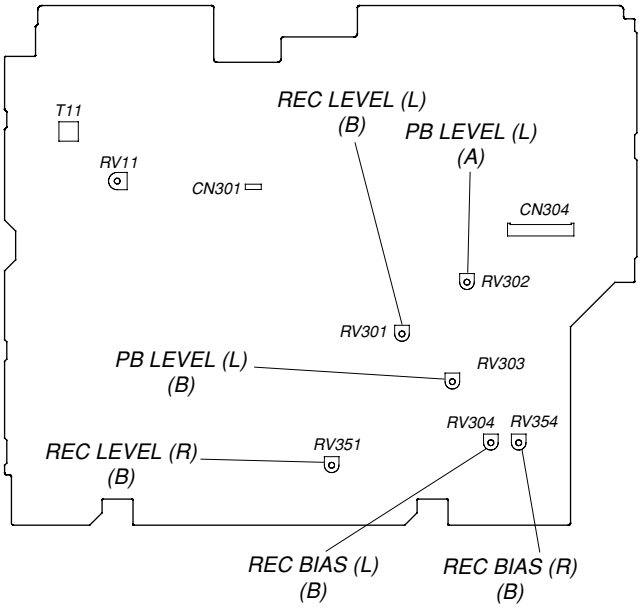
5. Mode: Playback



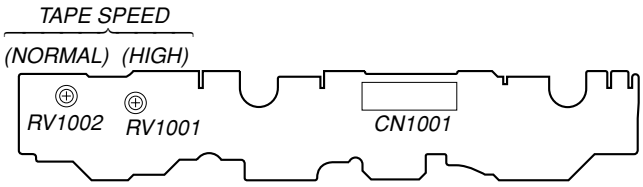
6. Confirm playback the signal recorded in step 3 become adjustable level as follows.
   If these levels do not adjustable level, adjustment the RV301 (L-CH) and RV351 (R-CH) on the MAIN board to repeat steps 4 and 5.

Adjustable level:
CN301 PB level: 33.4 to 37.5 mV (–27.3 to –26.3 dB)
Adjustment Location: MAIN board

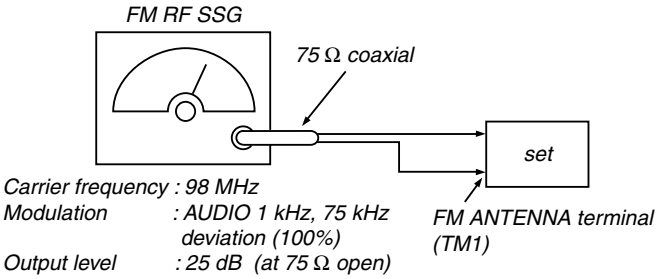
[MAIN BOARD] (Component Side)



[LEAF SW BOARD] (Component Side)



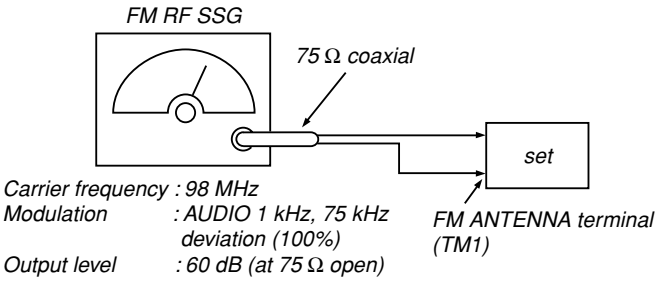
FM Tuned Level Adjustment


FM RF SSG
75 Ω coaxial
set
Carrier frequency : 98 MHz
Modulation : AUDIO 1 kHz, 75 kHz deviation (100%)
Output level : 25 dB (at 75 Ω open)
FM ANTENNA terminal
(TM1)

Procedure:
1. Supply a 25 dB 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust RV11 to the point (moment) when the TUNED indicator will change from going off to going on.

Adjustment Location: MAIN board

Null Adjustment

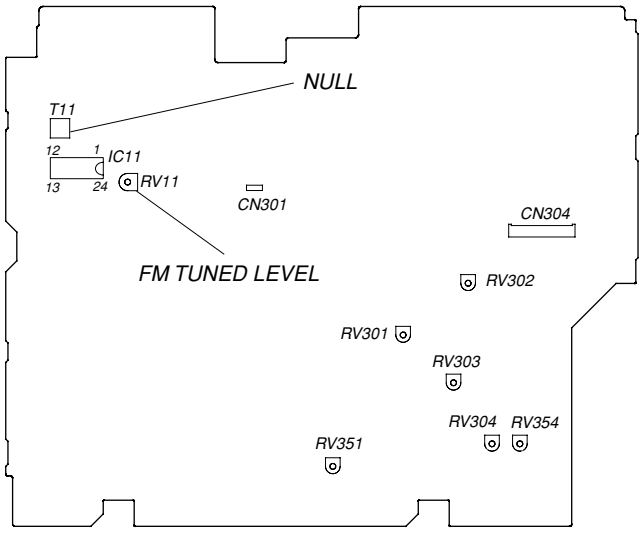

FM RF SSG
75 Ω coaxial
set
Carrier frequency : 98 MHz
Modulation : AUDIO 1 kHz, 75 kHz deviation (100%)
Output level : 60 dB (at 75 Ω open)
FM ANTENNA terminal
(TM1)

Procedure:
1. Supply a 60 dB 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Measure voltage between pin 22 and pin 3 of IC 11. Adjust T11 ubtil the voltage becomes 0 V.

Adjustment Location: MAIN board

Adjustment Location

[MAIN BOARD] Component side



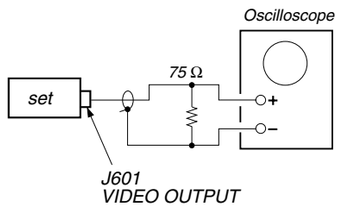
DVD SECTION

RE-ADJUSTMENT OF THE SERVO CIRCUIT
The re-adjustment of the servo circuit is necessary when the part which relates to the servo circuit is replaced.
Referring to "4-9. DRIVE AUTO ADJUSTMENT" (SUPPLEMENT-1 see page 6), Choose ALL and do the re-adjustment of each item of DVD-SL, CD and DVD-DL.

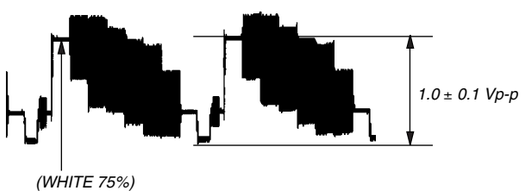
THE PART THAT THE RE-ADJUSTMENT OF THE SERVO CIRCUIT IS NECESSARY
11. Optical pick-up
12. RF AMP (IC001)
13. DSP IC (IC302)
14. Motor driver IC (IC401)
15. EEPROM (IC303)

Note :
1. DVD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use HLX-504 (J-6090-088-A) or HLX-505 (J-6090-089-A) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

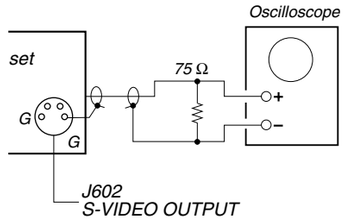
Video Level Adjustment (MB BOARD)
Purpose
This adjustment is made to satisfy the NTSC standard, and if not adjusted correctly, the brightness will be too large or small.



Procedure:
1. Connect oscilloscope to VIDEO output.
2. Load a disc (HLX-504 or HL-505) playback.
3. Adjust the RV501 to attain 1.0±0.1Vp-p.

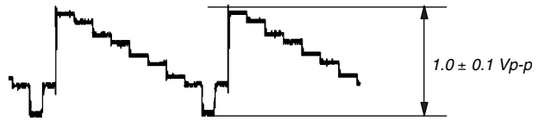


S-terminal Output Check
Purpose
Check S-video output.



Procedure:
1. Connect oscilloscope to S-VIDEO out. (S-Y teminal)
2. Load a disc (HLX-504 or HL-505) playback.

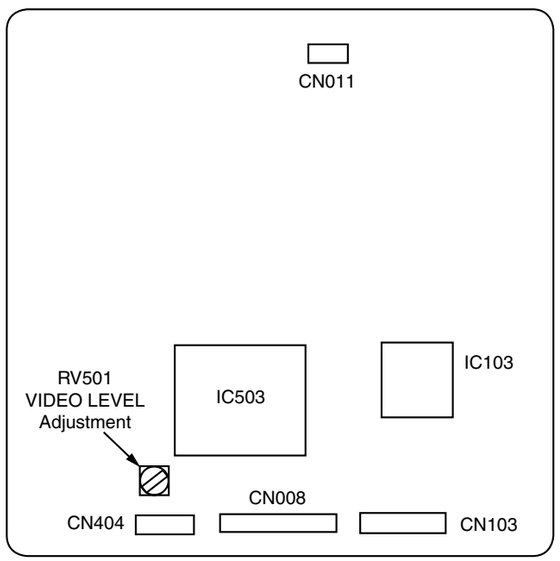
3. Confirm that the S-Y level is 1.0 ± 0.1Vp-p.



4. Connect oscilloscope to S-VIDEO output. (S-C teminal)
5. Connect that the S-C burst is 286 ± 50mVp-p.

Adjustment Location

MB BOARD (SIDE A)



SECTION 6
DIAGRAMS

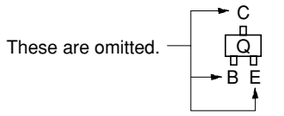
THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

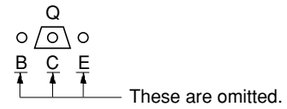
Note on Schematic Diagram:
- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.
- : fusible resistor.
- : panel designation.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

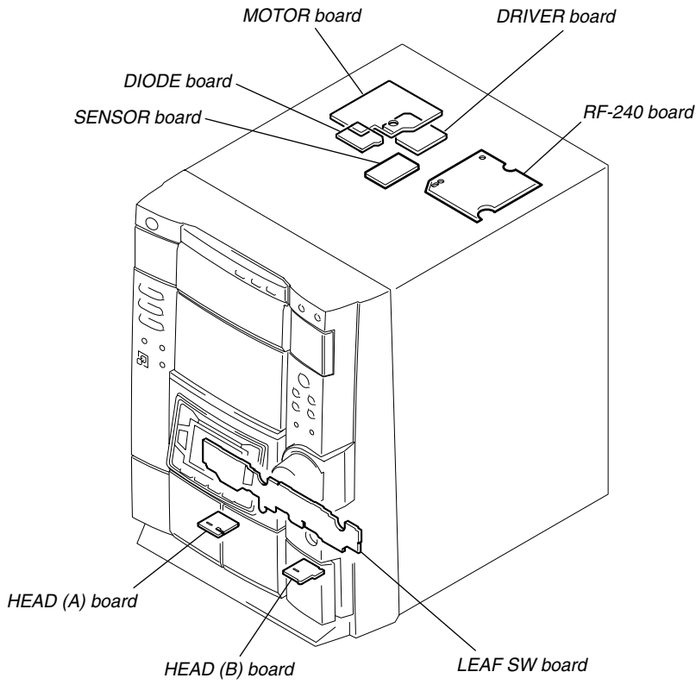
- : B+ Line.
- : B– Line.
- : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - : FM
  - : AM
  - : PB (DECK A)
  - : PB (DECK B)
  - : REC (DECK B)
  - : digital out
  - : MD (VIDEO)
- Abbreviation
  - CND : Canadian model
  - EA : Saudi Arabia model
  - MY : Malaysia model
  - SP : Singapore model
  - TH : Thai model
  - MX : Mexican model
  - E91 : 220V AC area model
  - AUS : Australian model

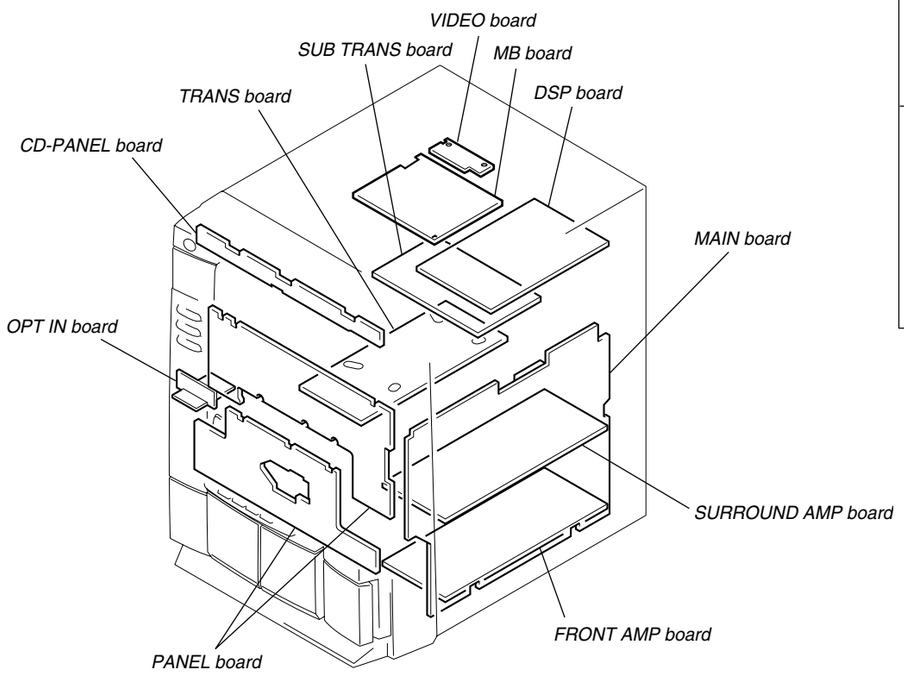
Note on Printed Wiring Boards:
- : parts extracted from the component side.
- : Pattern from the side which enables seeing.
- Indication of transistor.





6-1. CIRCUIT BOARD LOCATION





● **WAVEFORMS**

– MB BOARD –

① IC102 ⑧ XTO

27MHz

② IC102 ⑨ 512-2OUT

DVD STOP : 22.5792MHz
DVD PLAY : 24.576MHx

③ IC102 ⑬ 33-2OUT

33.8688MHz

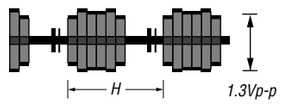
④ IC102 ③ 27-1OUT

27MHz

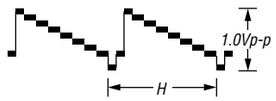
⑤ IC103 ㉝ X1

16.5MHz

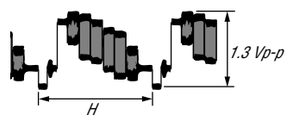
⑥ IC701 ② INA



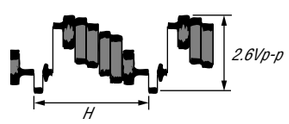
⑦ IC701 ④ INB



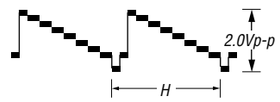
⑧ IC701 ⑦ INC



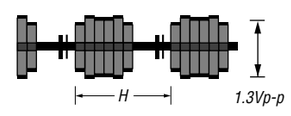
⑨ IC701 ⑨ OUT C2



⑩ IC701 ⑫ OUT B2

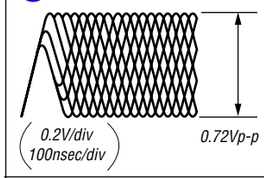


⑪ IC701 ⑮ OUT A1

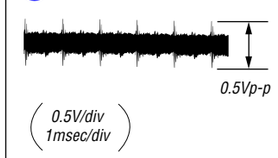


– PF-240 BOARD –

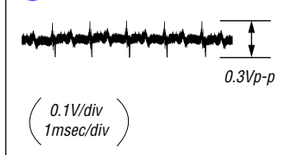
① IC001 ② RFIN



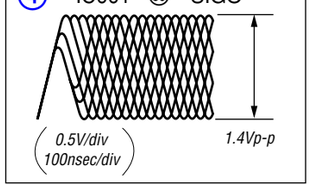
② IC001 ㊶ TE



③ IC001 ㊷ FE

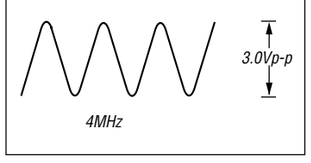


④ IC001 ㊾ SIGO



– PANEL BOARD –

① IC1101 ㉜ XO



4MHz

– MAIN BOARD –

① NO303 ⑧ E-HOT

80kHz

② T301 ④

80kHz

③ IC401 ⑪ XC-OUT

32.768kHz

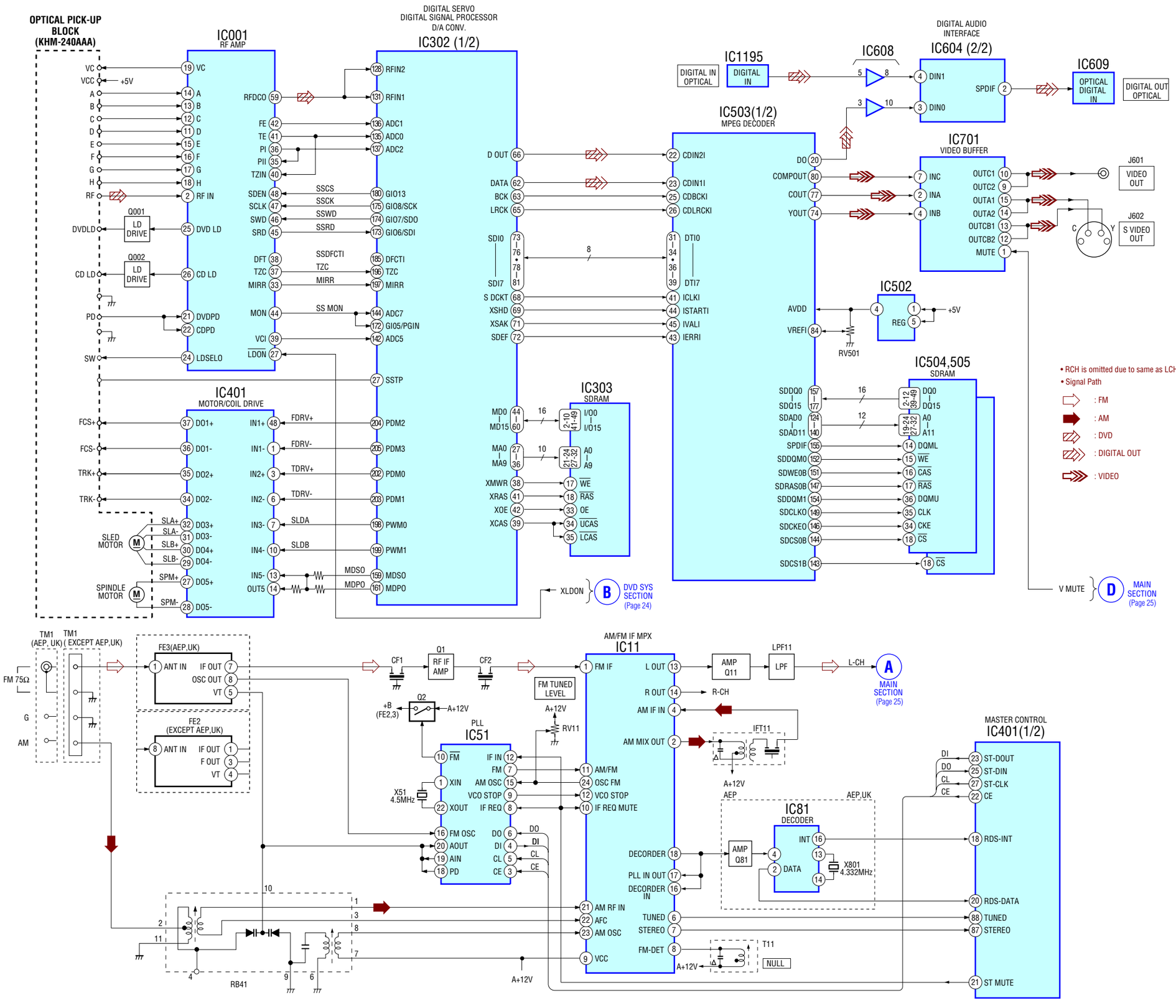
④ IC401 ⑬ X-OUT

16MHz

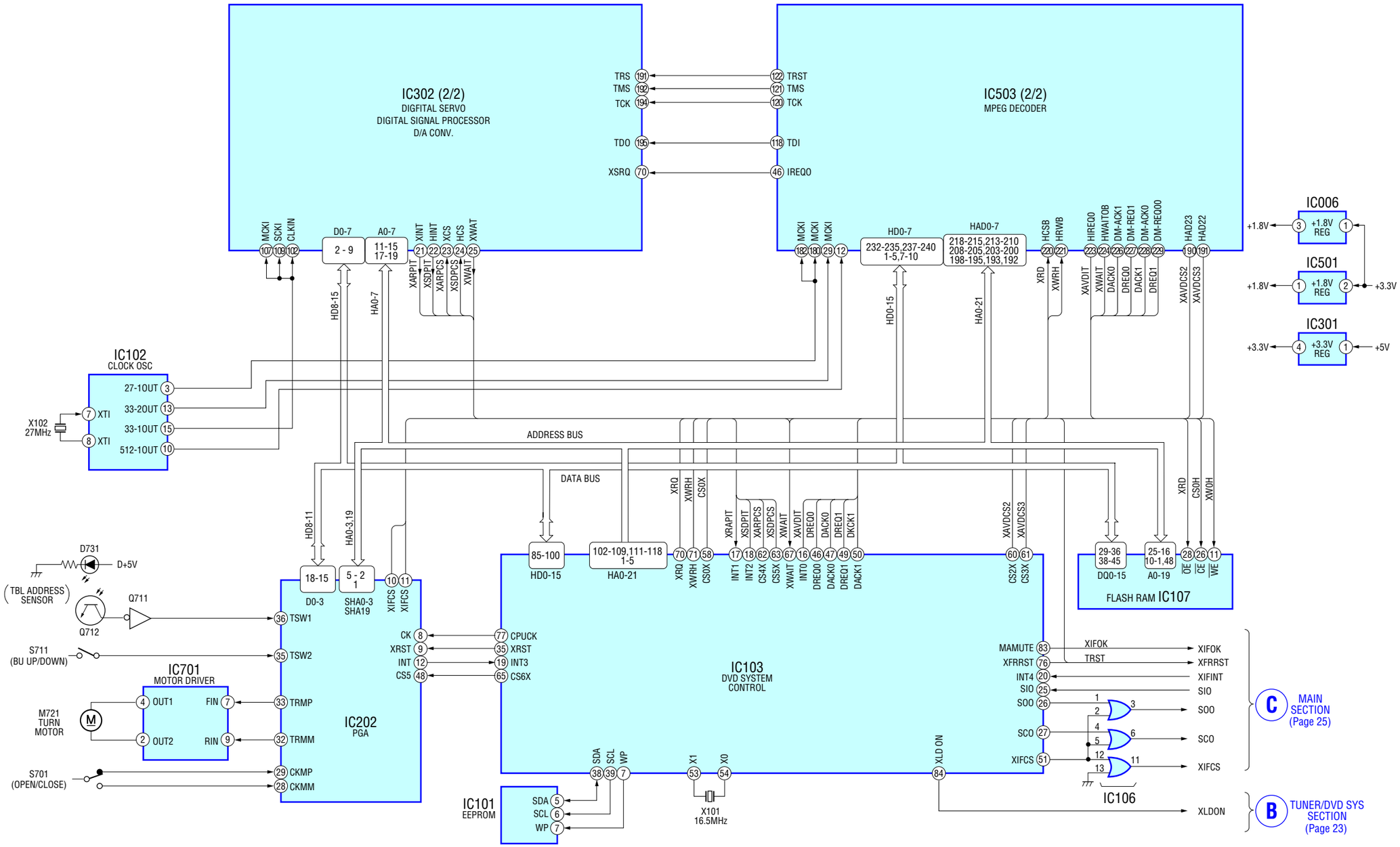
⑤ IC51 ㉒ XOUT

4.5MHz

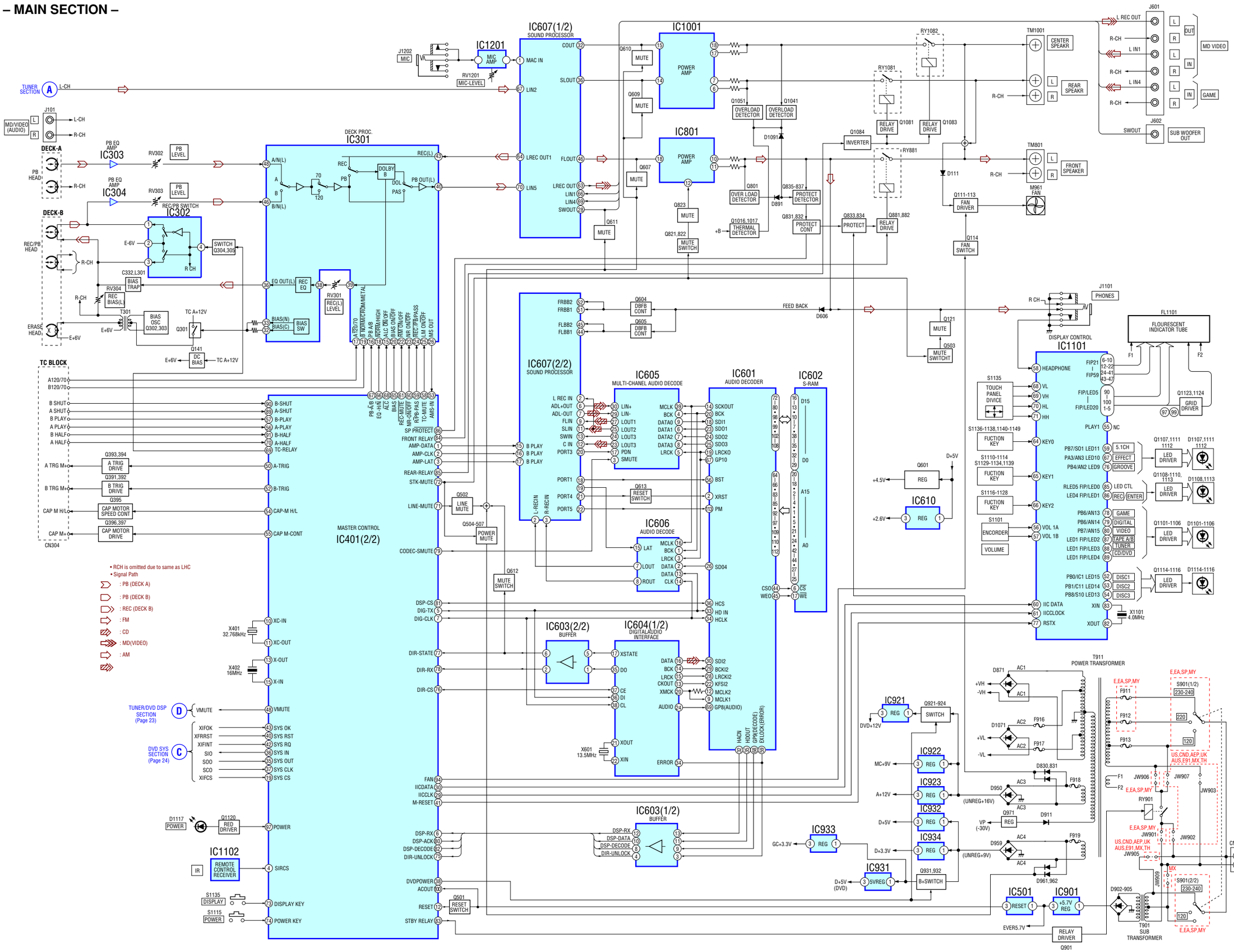
6-2. BLOCK DIAGRAMS
– TUNER/DVD DSP SECTION –



– DVD SYS SECTION –

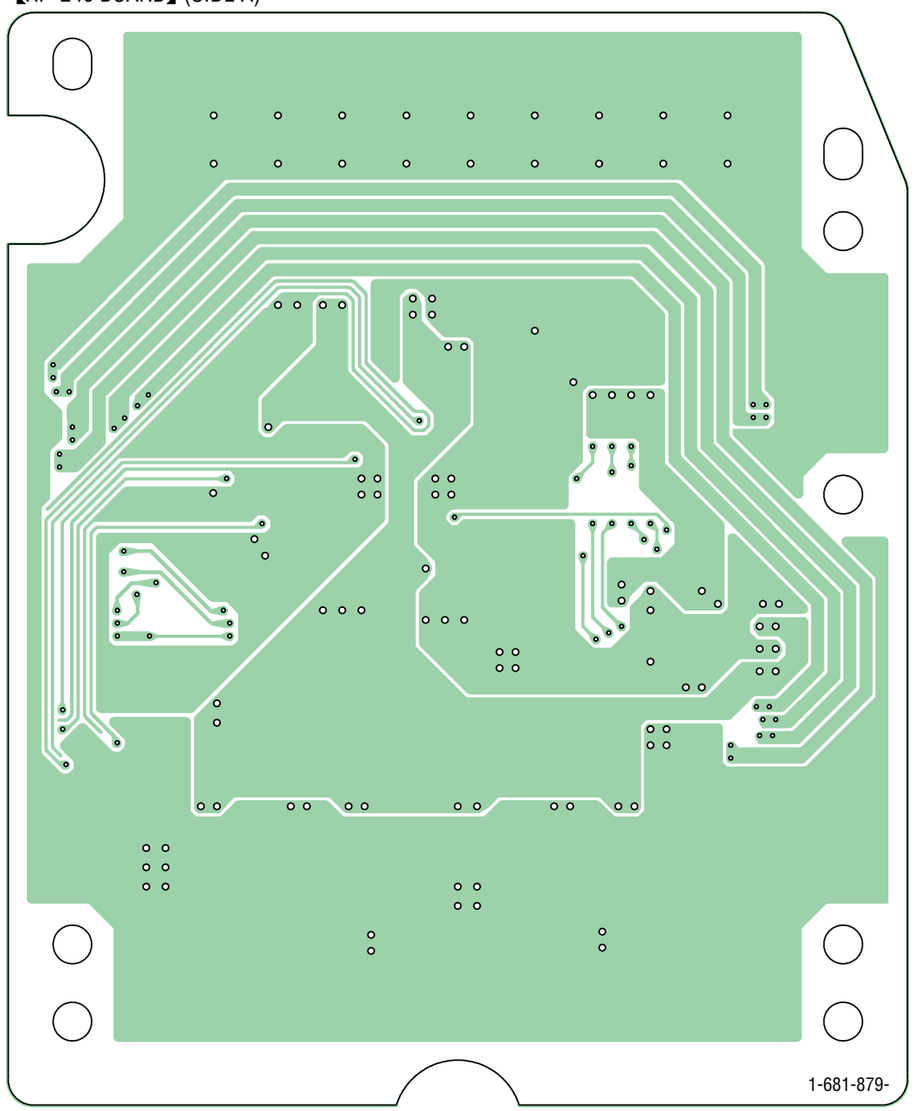


– MAIN SECTION –



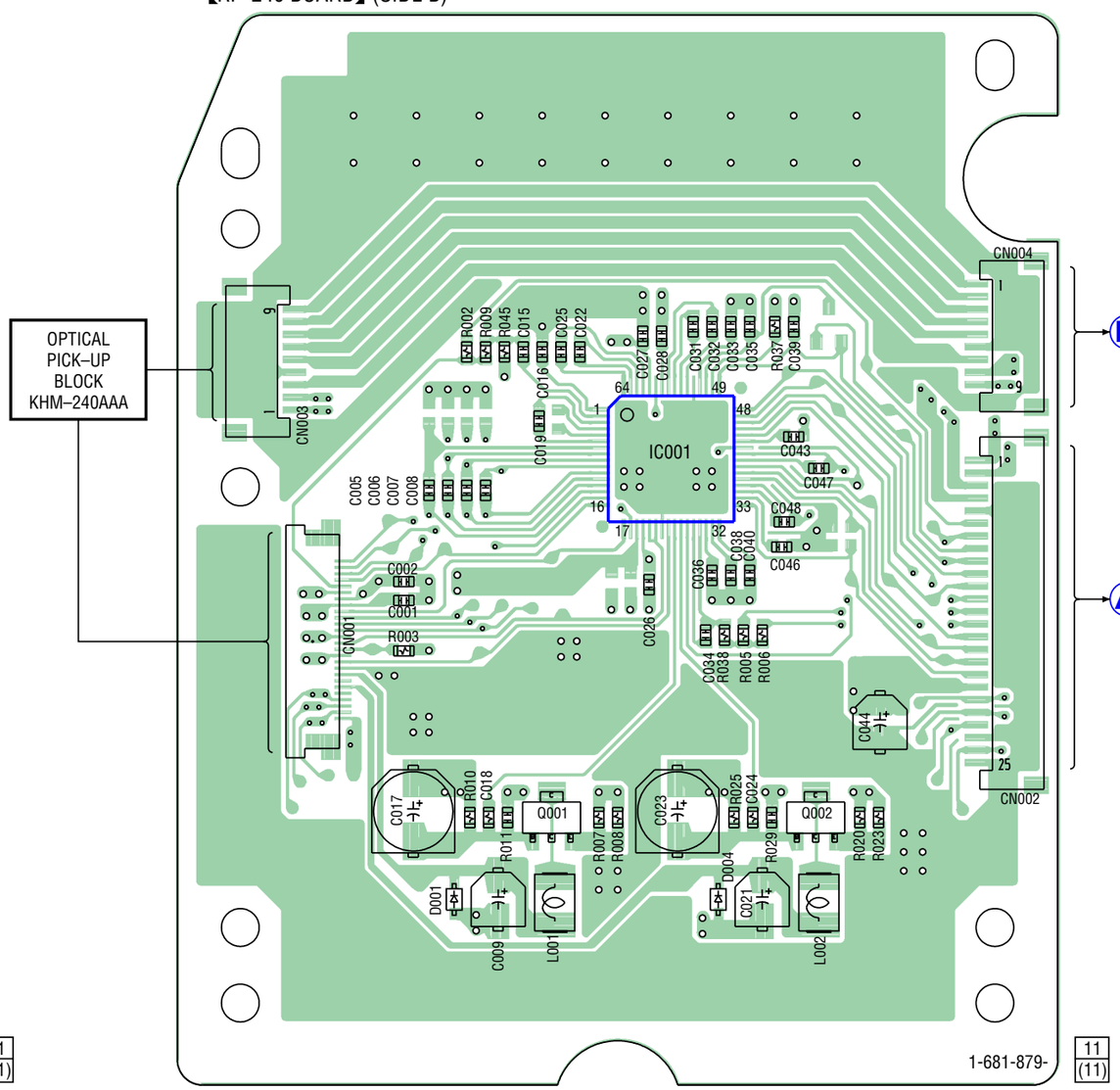
6-3. PRINTED WIRING BOARD – RF-240 SECTION – • See page 22 for Circuit Boards Location.

【RF–240 BOARD】(SIDE A)



1-681-879-

【RF–240 BOARD】(SIDE B)

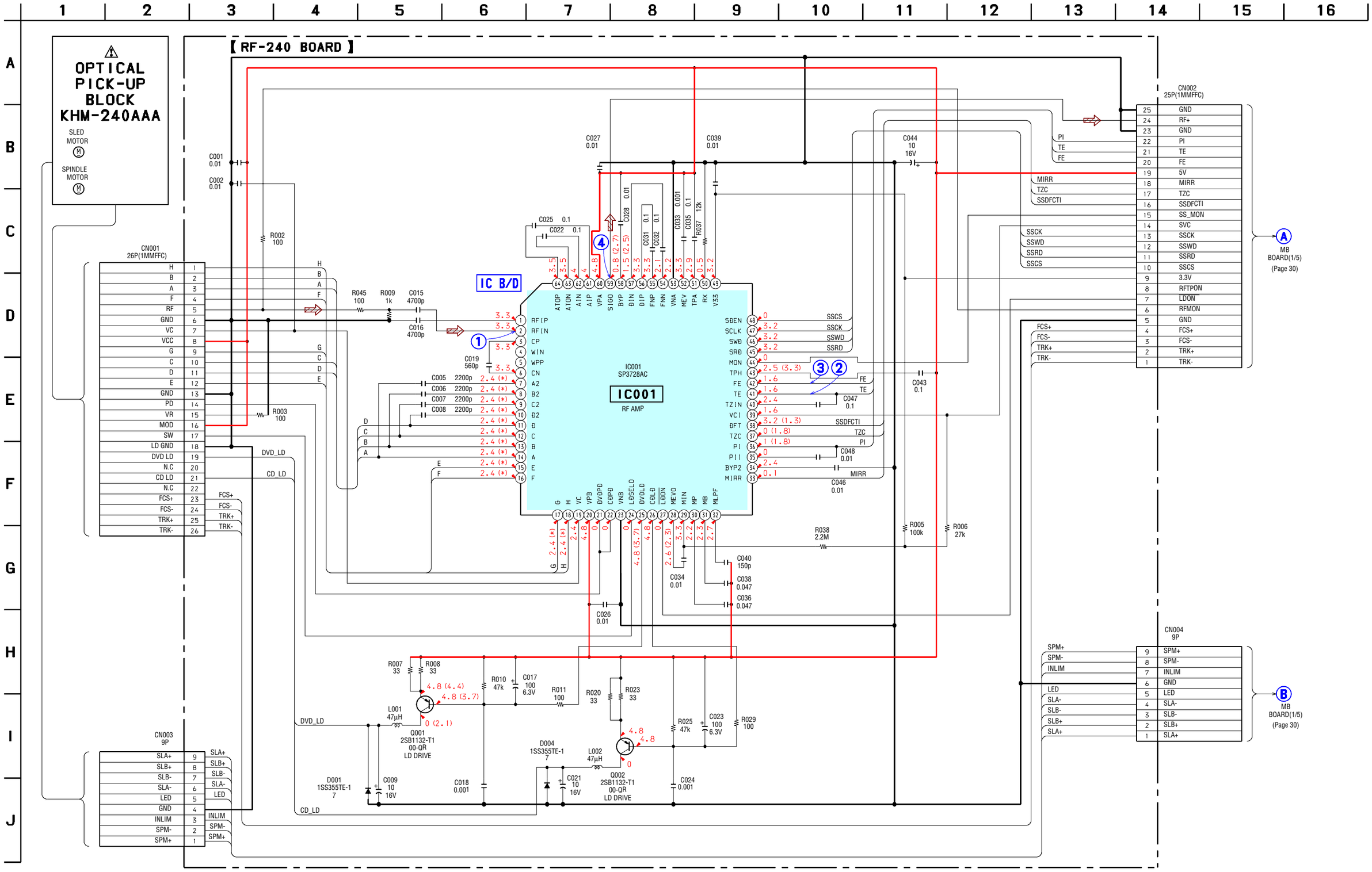


1-681-879-

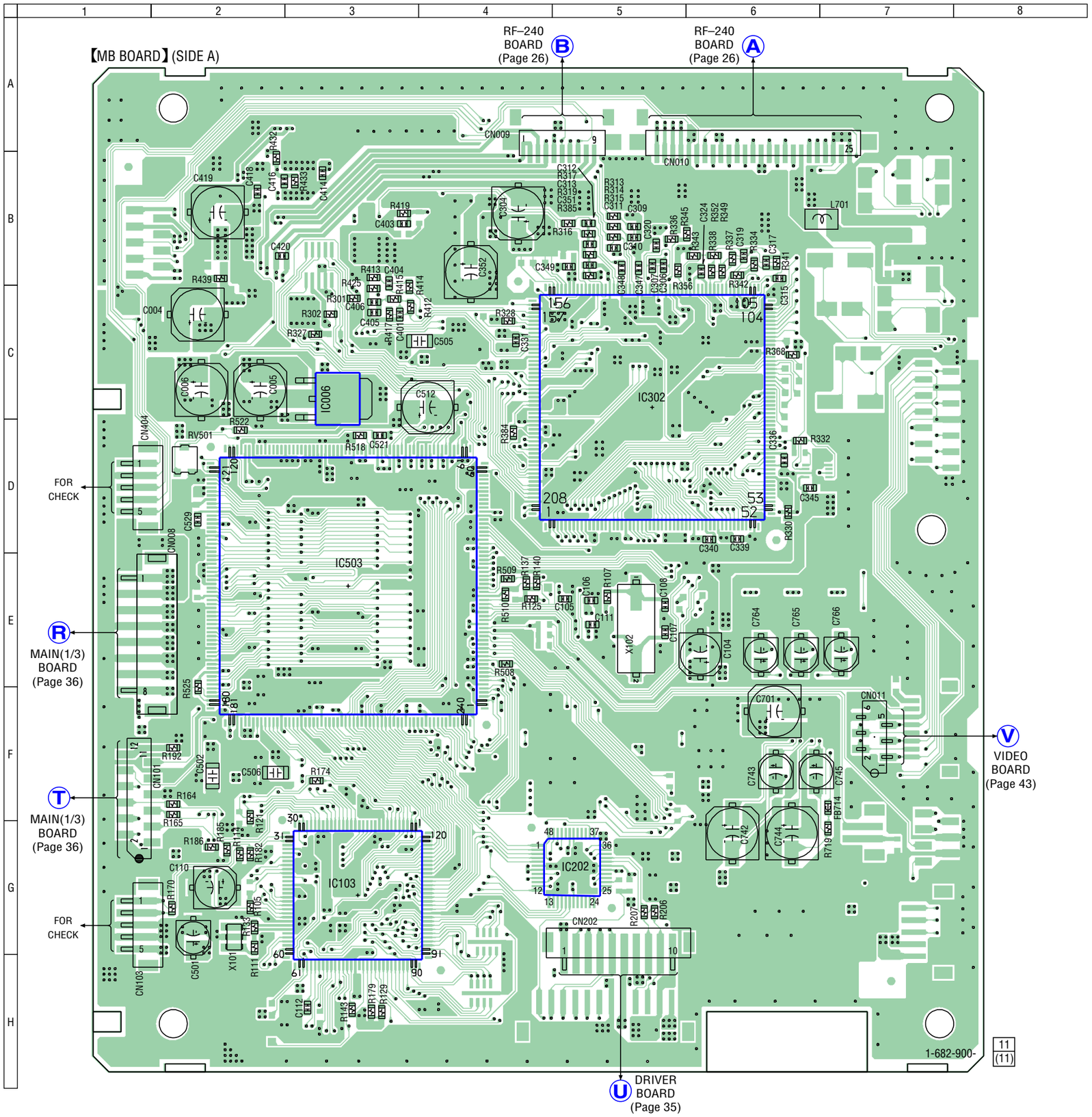
• **Semiconductor Location**

Ref. No.	Location
D001	E-7
D004	E-9
IC001	C-8
Q001	E-8
Q002	E-9

6-4. SCHEMATIC DIAGRAM – RF-240 SECTION – • See page 22 for Waveforms. • See page 64 for IC Block Diagrams.



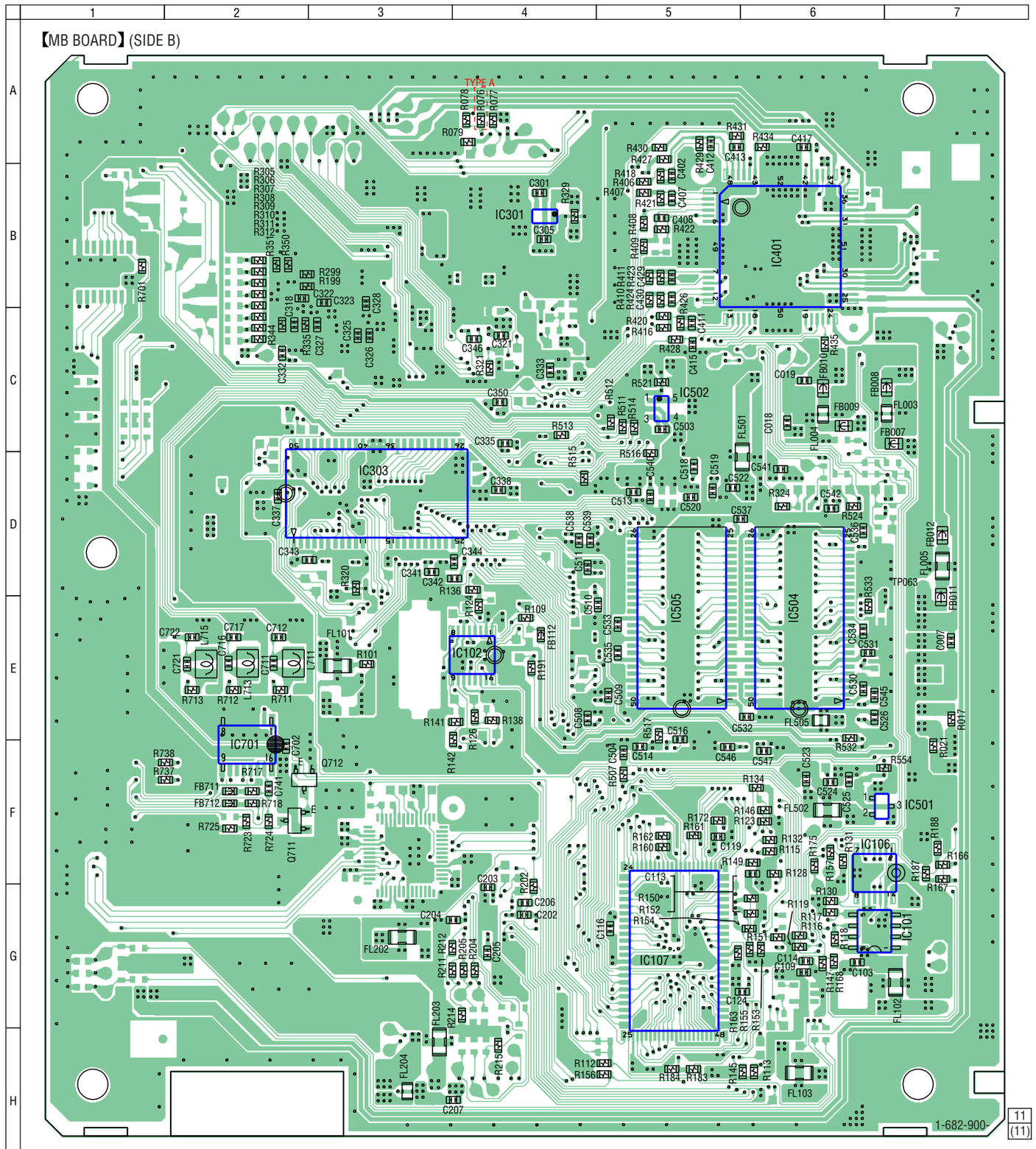
6-5.PRINTED WIRING BOARD – MB SECTION – • See page 22 for Circuit Boards Location.



• **Semiconductor Location**

Ref. No.	Location
IC006	C-3
IC103	G-3
IC202	G-5
IC302	C-5
IC503	E-3

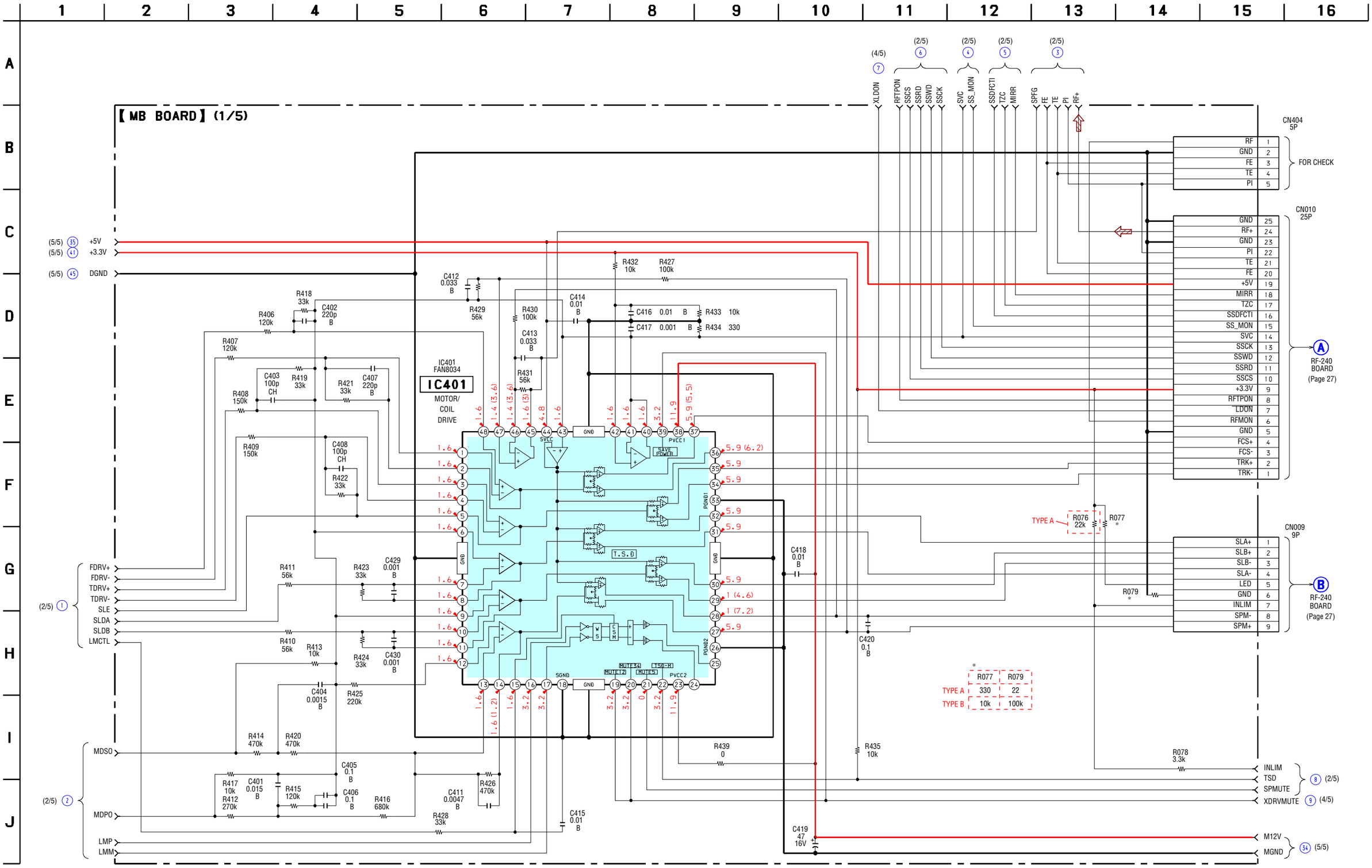
【MB BOARD】(SIDE B)



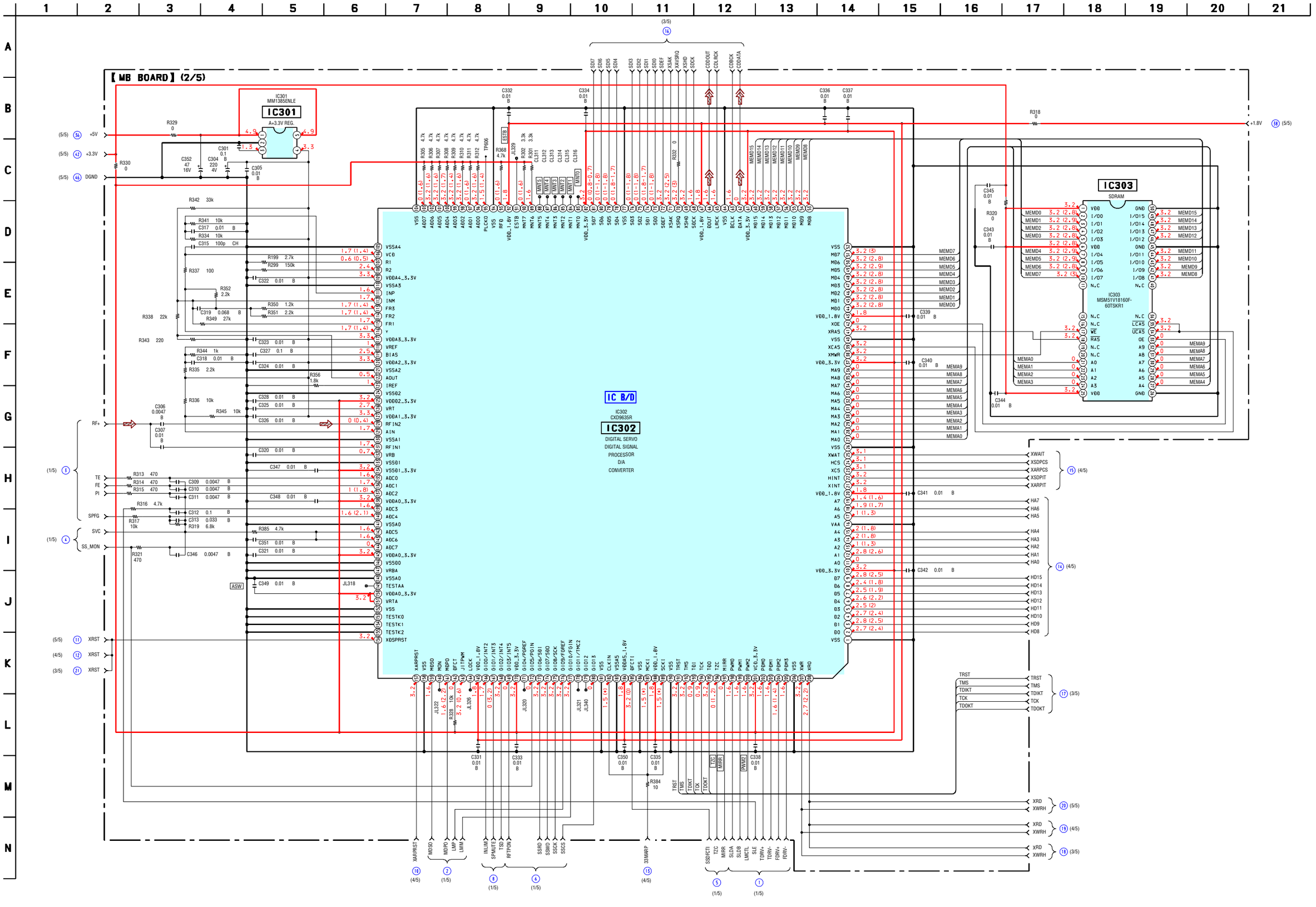
• **Semiconductor Location**

Ref. No.	Location
IC101	G-6
IC102	E-4
IC106	F-6
IC107	G-5
IC301	B-4
IC303	D-3
IC401	B-6
IC501	F-6
IC502	C-5
IC504	E-6
IC505	E-5
IC701	F-2
Q711	F-2
Q712	F-2

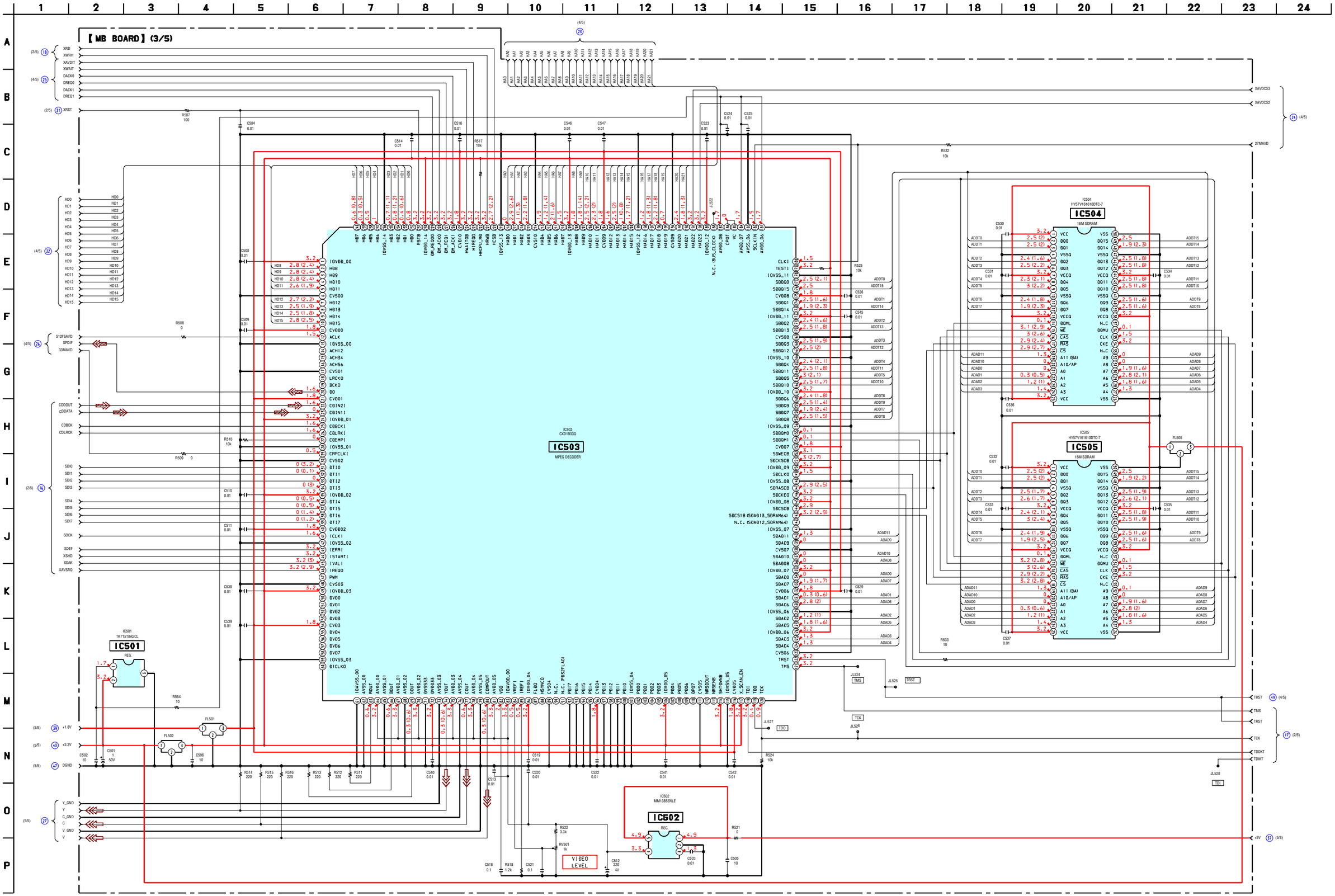
6-6. SCHEMATIC DIAGRAM – MB(1/5) SECTION –



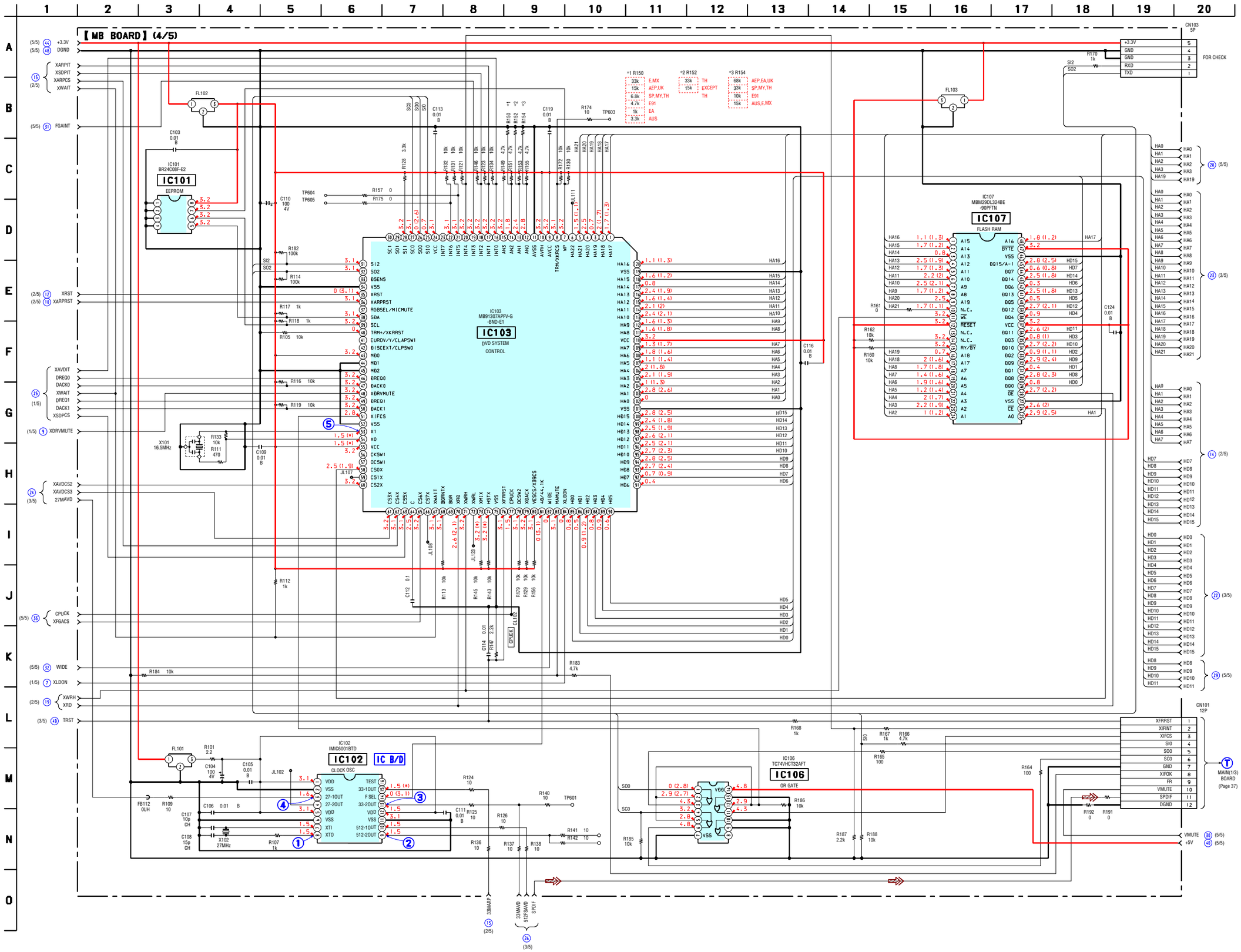
6-7. SCHEMATIC DIAGRAM – MB(2/5) SECTION – • See page 61 for IC Block Diagrams.



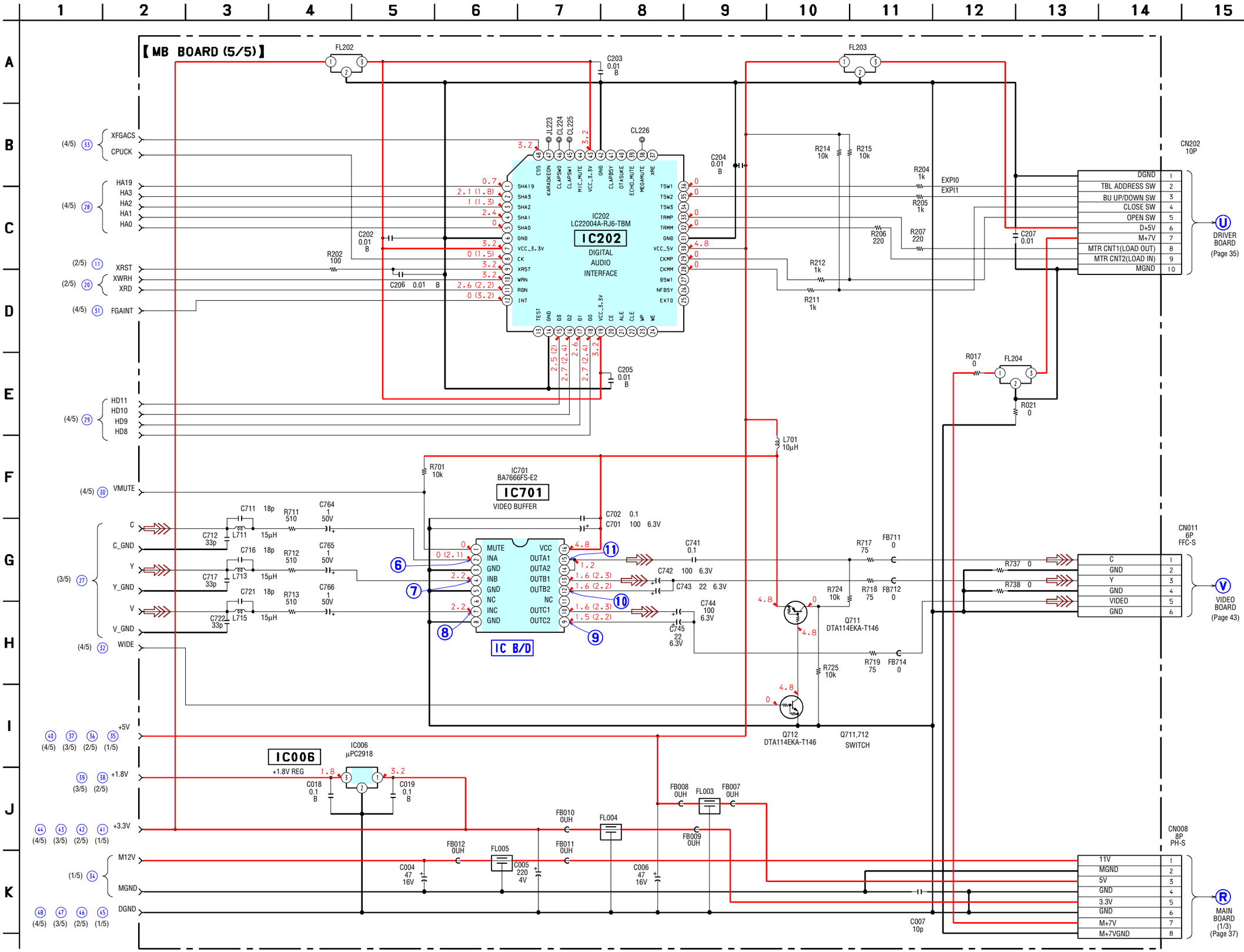
6-8. SCHEMATIC DIAGRAM – MB(3/5) SECTION –



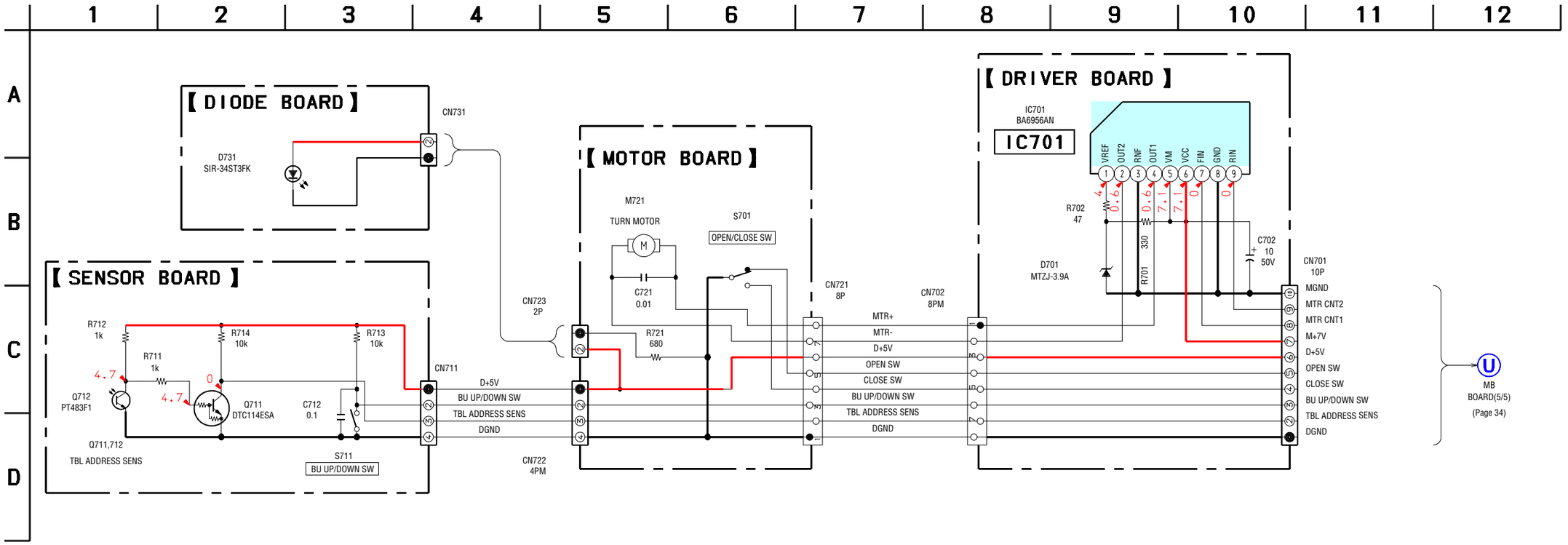
6-9. SCHEMATIC DIAGRAM – MB(4/5) SECTION – • See page 22 for Waveforms. • See page 61 for IC Block Diagrams. • See page 54 for IC Pin Function.



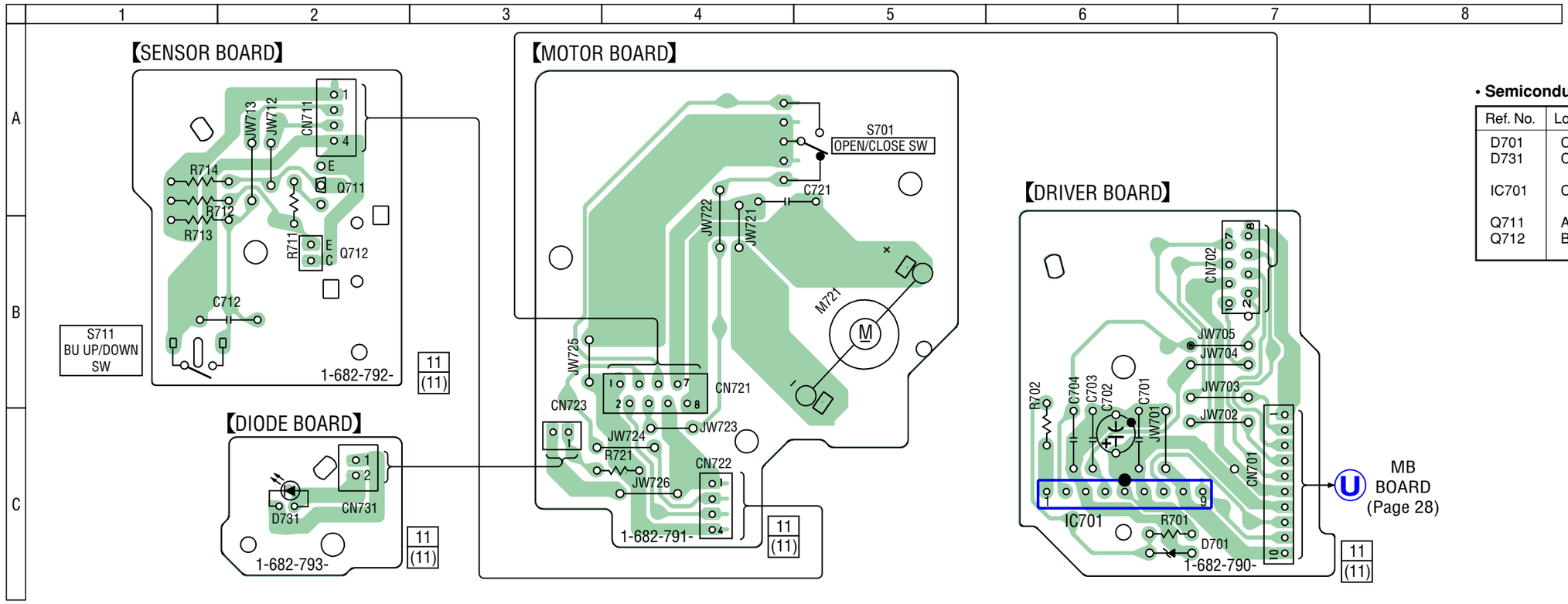
6-10. SCHEMATIC DIAGRAM – MB(5/5) SECTION – • See page 22 for Waveforms. • See page 63 for IC Block Diagrams.



6-11. SCHEMATIC DIAGRAM – DRIVER SECTION –



6-12.PRINTED WIRING BOARD – DRIVER SECTION – • See page 22 for Circuit Boards Location.



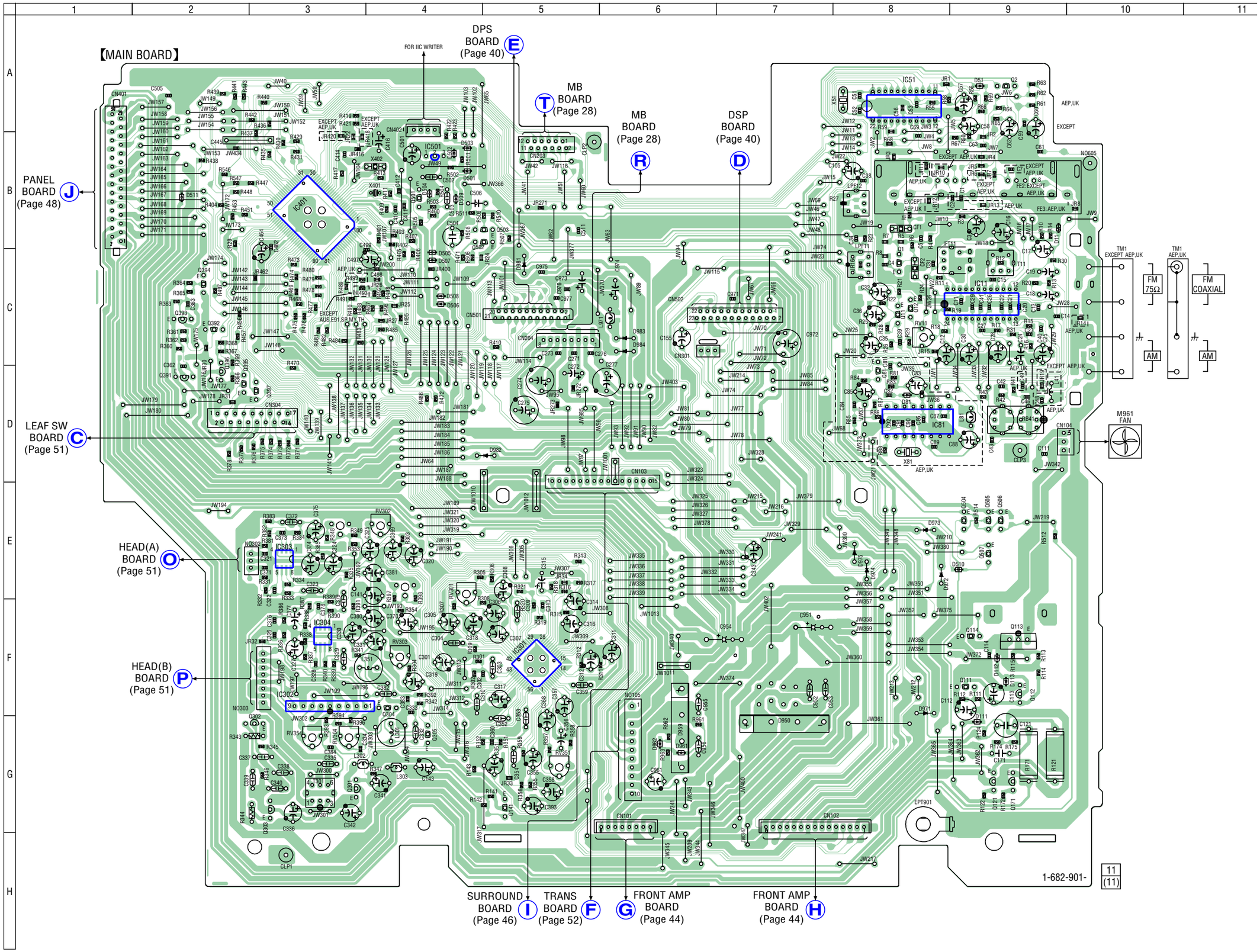
• **Semiconductor Location**

Ref. No.	Location
D701	C-6
D731	C-2
IC701	C-6
Q711	A-2
Q712	B-2

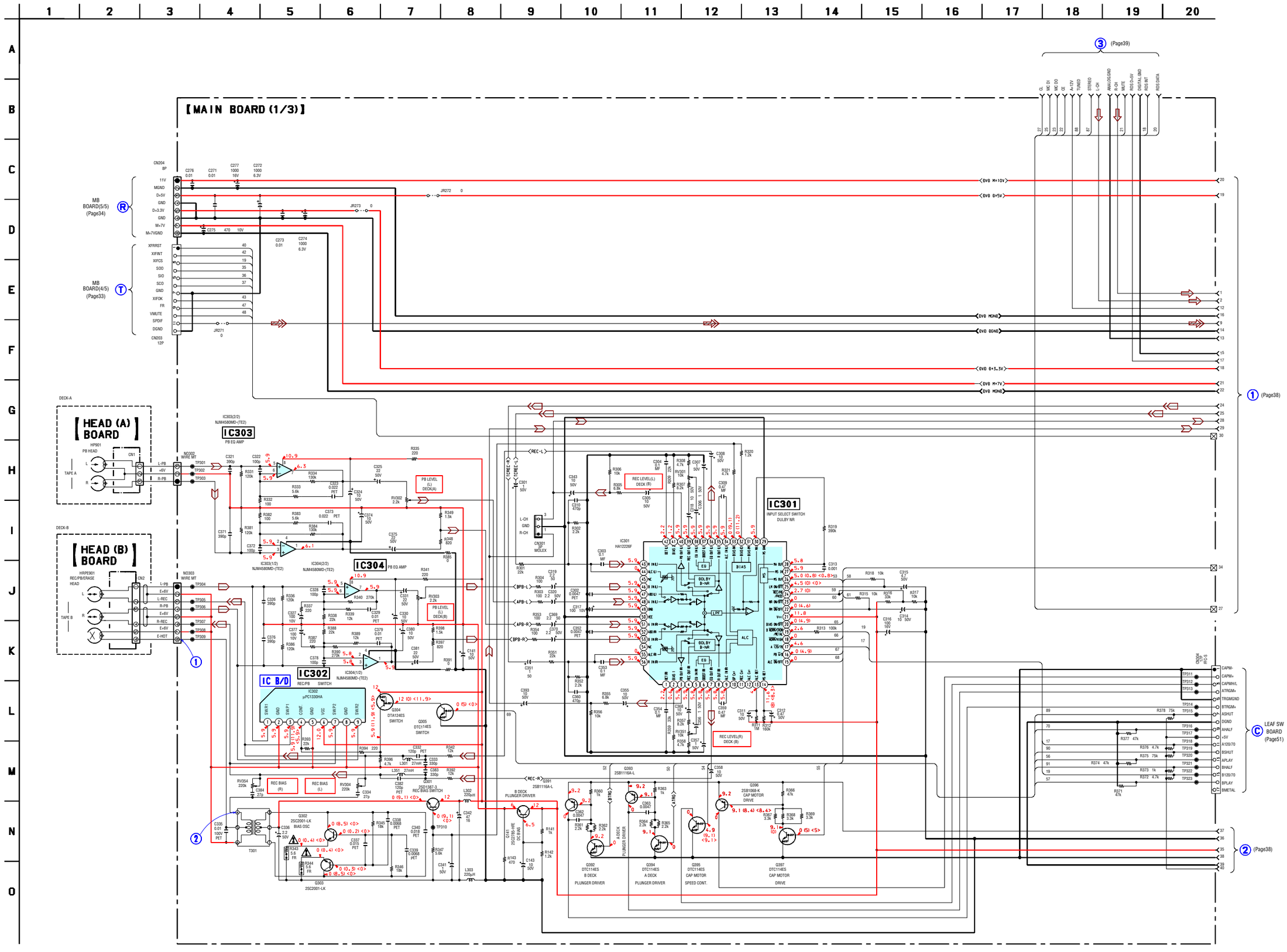
6-13. PRINTED WIRING BOARD – MAIN SECTION – • See page 22 for Circuit Boards Location.

• **Semiconductor Location**

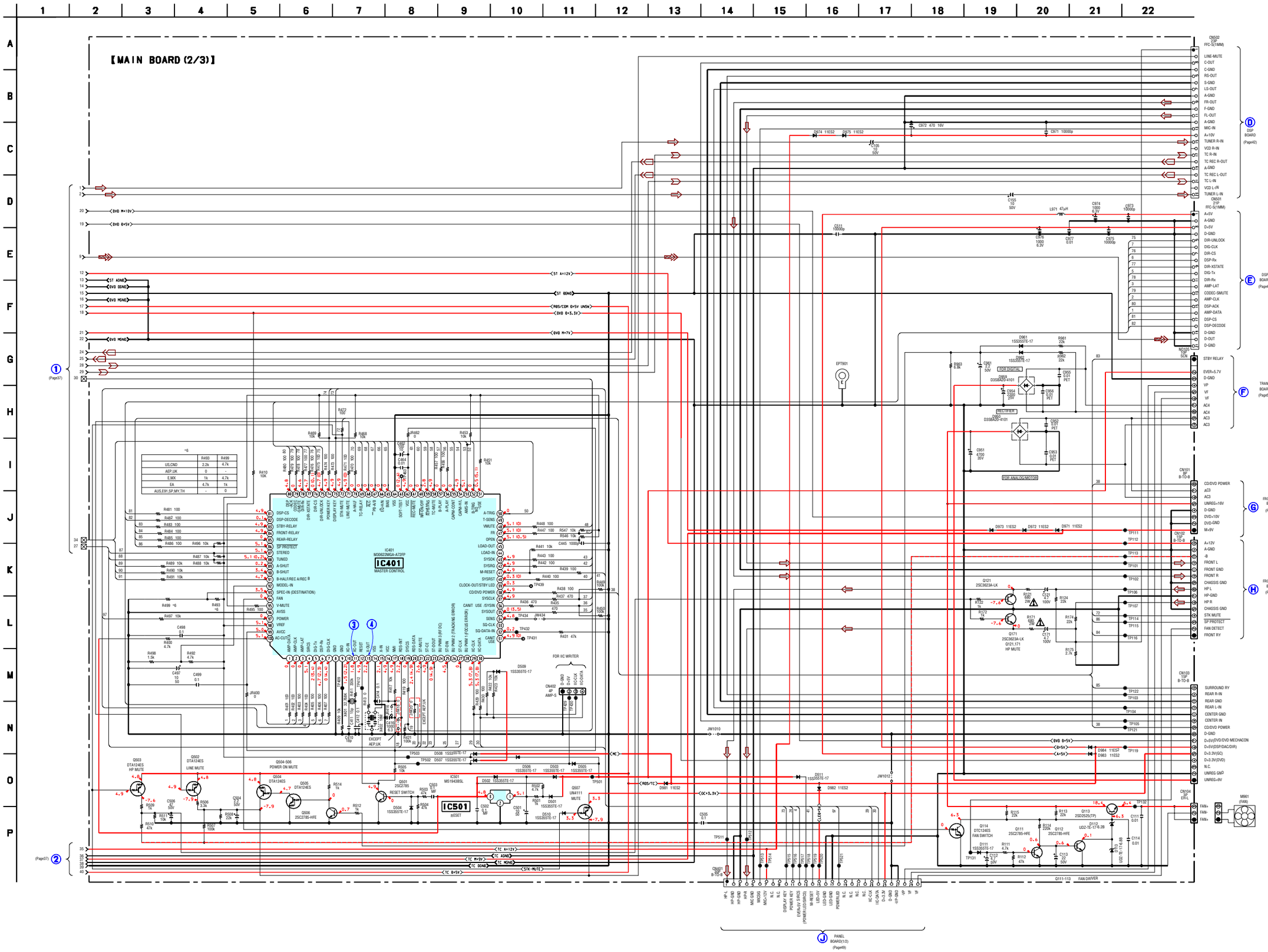
Ref. No.	Location
D51	A-9
D81	D-8
D111	G-9
D112	F-9
D113	F-9
D501	B-4
D502	B-4
D503	B-4
D504	B-4
D505	C-4
D506	C-4
D507	C-4
D508	C-4
D509	B-4
D510	E-9
D511	B-2
D950	G-6
D959	G-6
D961	G-6
D962	G-6
D971	F-8
D972	E-8
D973	E-8
D974	E-8
D975	E-8
D981	C-5
D982	D-5
D983	C-6
D984	C-6
IC11	C-9
IC51	A-8
IC81	D-8
IC301	F-5
IC302	F-2
IC303	E-3
IC304	F-3
IC401	B-3
IC501	B-4
Q1	C-8
Q2	A-9
Q11	C-8
Q12	C-8
Q81	D-8
Q111	F-9
Q112	F-9
Q113	F-9
Q114	F-9
Q121	G-9
Q141	G-5
Q171	G-9
Q301	G-3
Q302	G-3
Q303	G-3
Q304	F-4
Q305	G-4
Q391	D-2
Q392	C-2
Q393	C-2
Q394	C-2
Q395	D-2
Q396	D-2
Q397	D-3
Q501	B-4
Q502	B-5
Q503	B-5
Q504	E-9
Q505	E-9
Q506	E-9
Q507	E-9



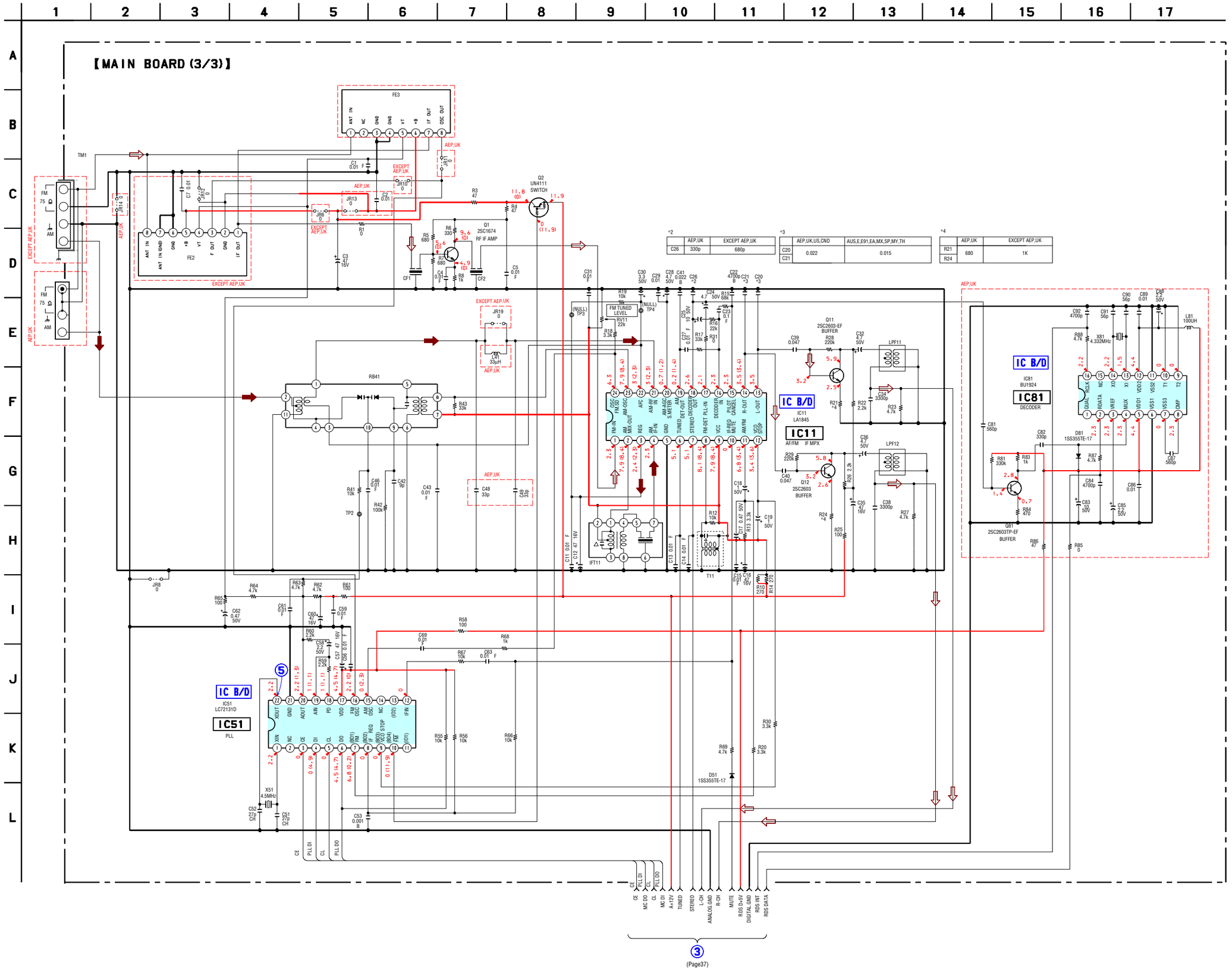
6-14. SCHEMATIC DIAGRAM – MAIN (1/3) SECTION – • See page 22 for Waveforms. • See page 61 for IC Block Diagrams.



6-15. SCHEMATIC DIAGRAM – MAIN (2/3) SECTION – • See page 22 for Waveforms. • See page 56 for IC Pin Function.

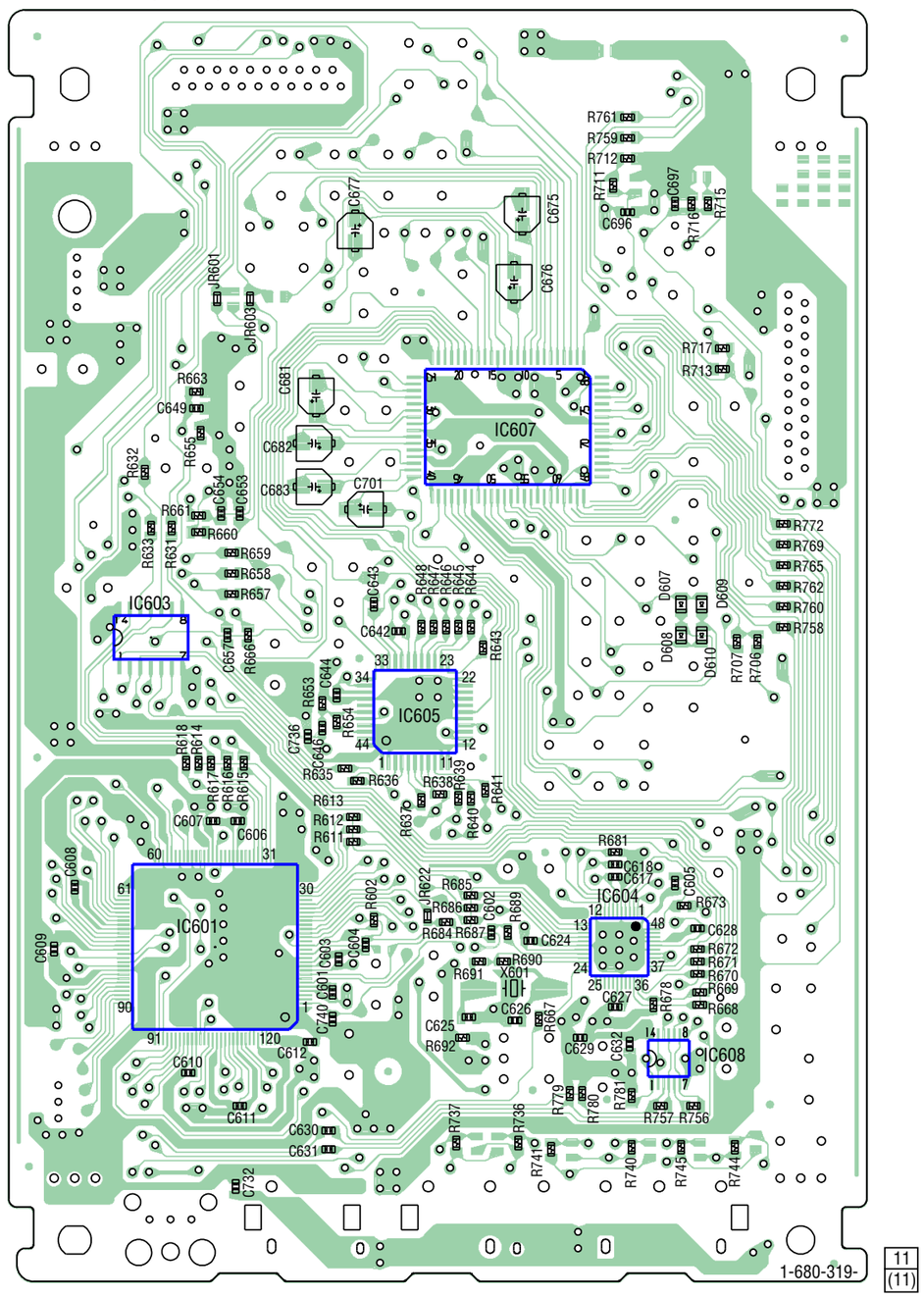


6-16. SCHEMATIC DIAGRAM – MAIN (3/3) SECTION – • See page 22 for Waveforms. • See page 62,63 for IC Block Diagrams.

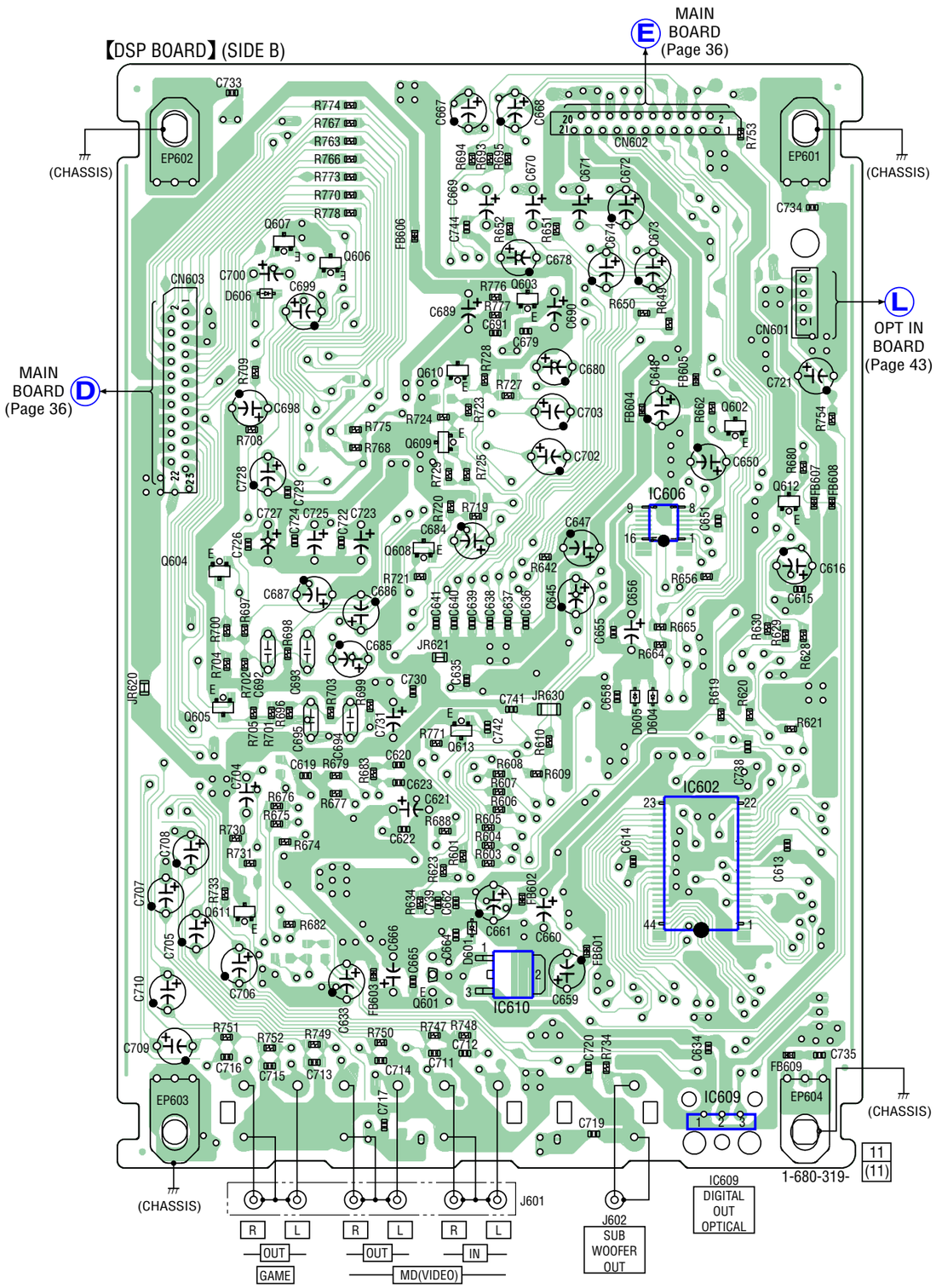


6-17. PRINTED WIRING BOARD – DSP SECTION – • See page 22 for Circuit Boards Location.

【DSP BOARD】(SIDE A)



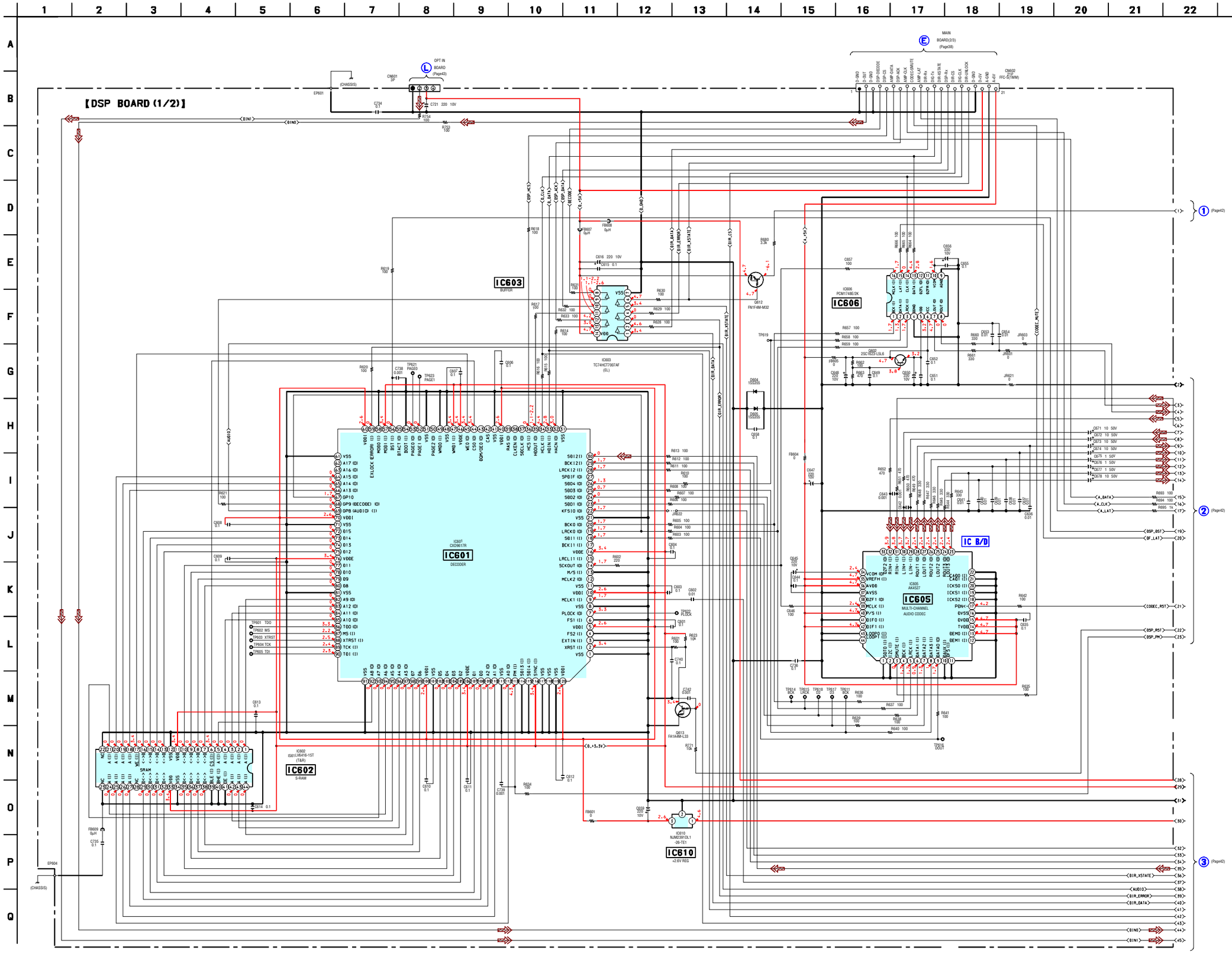
【DSP BOARD】(SIDE B)



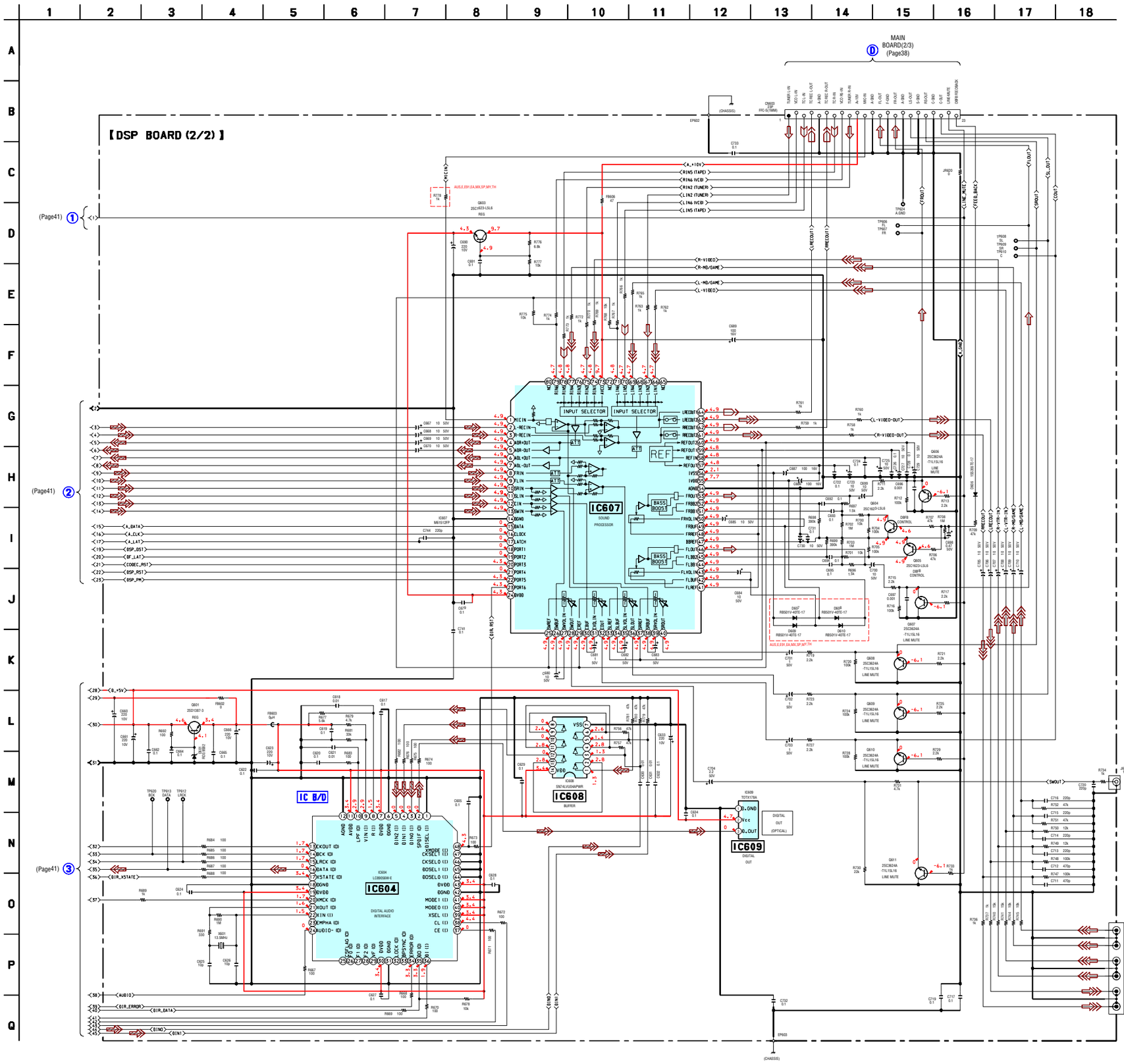
- **Semiconductor Location**

Ref. No.	Location
D601	F-8
D604	E-9
D605	E-9
D606	B-7
D607	D-4
D608	D-4
D609	D-4
D610	D-4
IC601	E-2
IC602	E-9
IC603	D-1
IC604	E-4
IC605	D-3
IC606	C-9
IC607	C-3
IC608	F-4
IC609	G-9
IC610	F-8
Q601	F-8
Q602	C-9
Q603	B-8
Q604	D-6
Q605	E-6
Q606	B-7
Q607	B-7
Q608	D-8
Q609	C-8
Q610	C-8
Q611	F-7
Q612	C-10
Q613	E-8

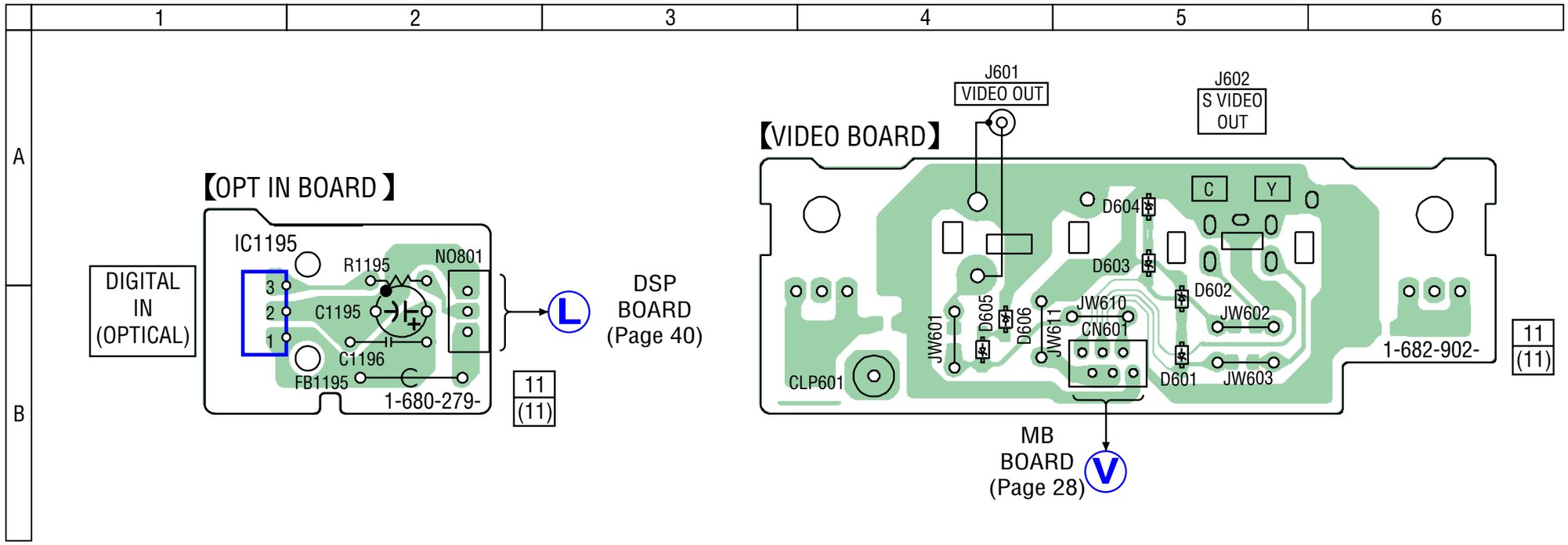
6-18. SCHEMATIC DIAGRAM – DSP (1/2) SECTION – • See page 59 for IC Pin Function. • See page 62 for IC Block Diagrams.



6-19. SCHEMATIC DIAGRAM – DSP (2/2) SECTION – • See page 63 for IC Block Diagrams.



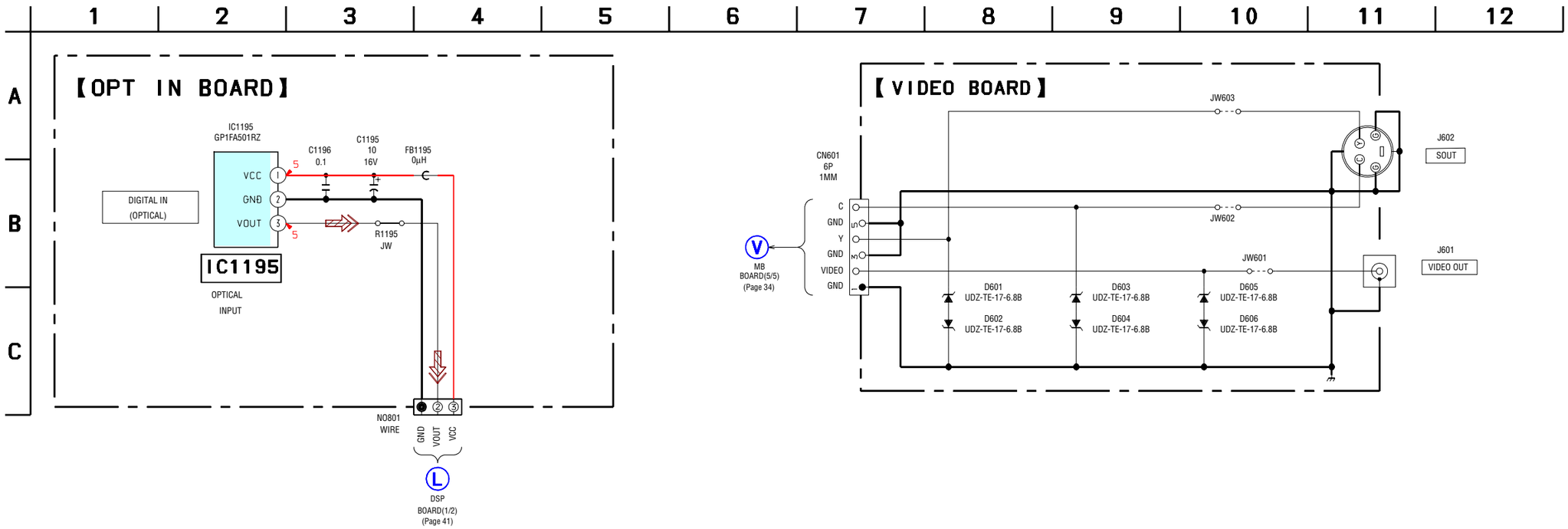
6-20. PRINTED WIRING BOARD – OPT SECTION – • See page 22 for Circuit Boards Location.



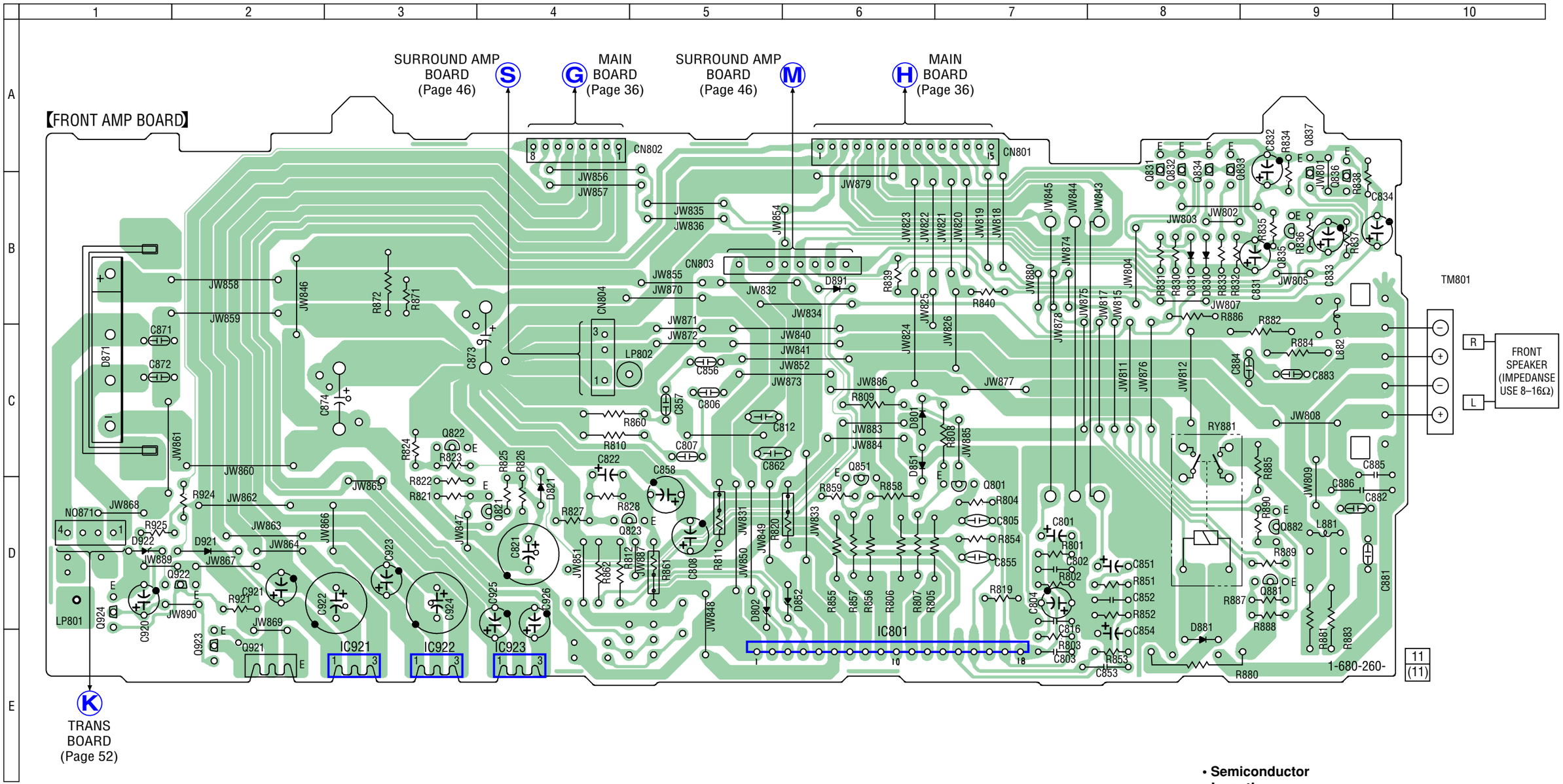
- **Semiconductor Location**

Ref. No.	Location
D601	B-5
D602	B-5
D603	A-5
D604	A-5
D605	B-4
D606	B-4
IC1195	B-1

6-21. SCHEMATIC DIAGRAM – OPT SECTION –



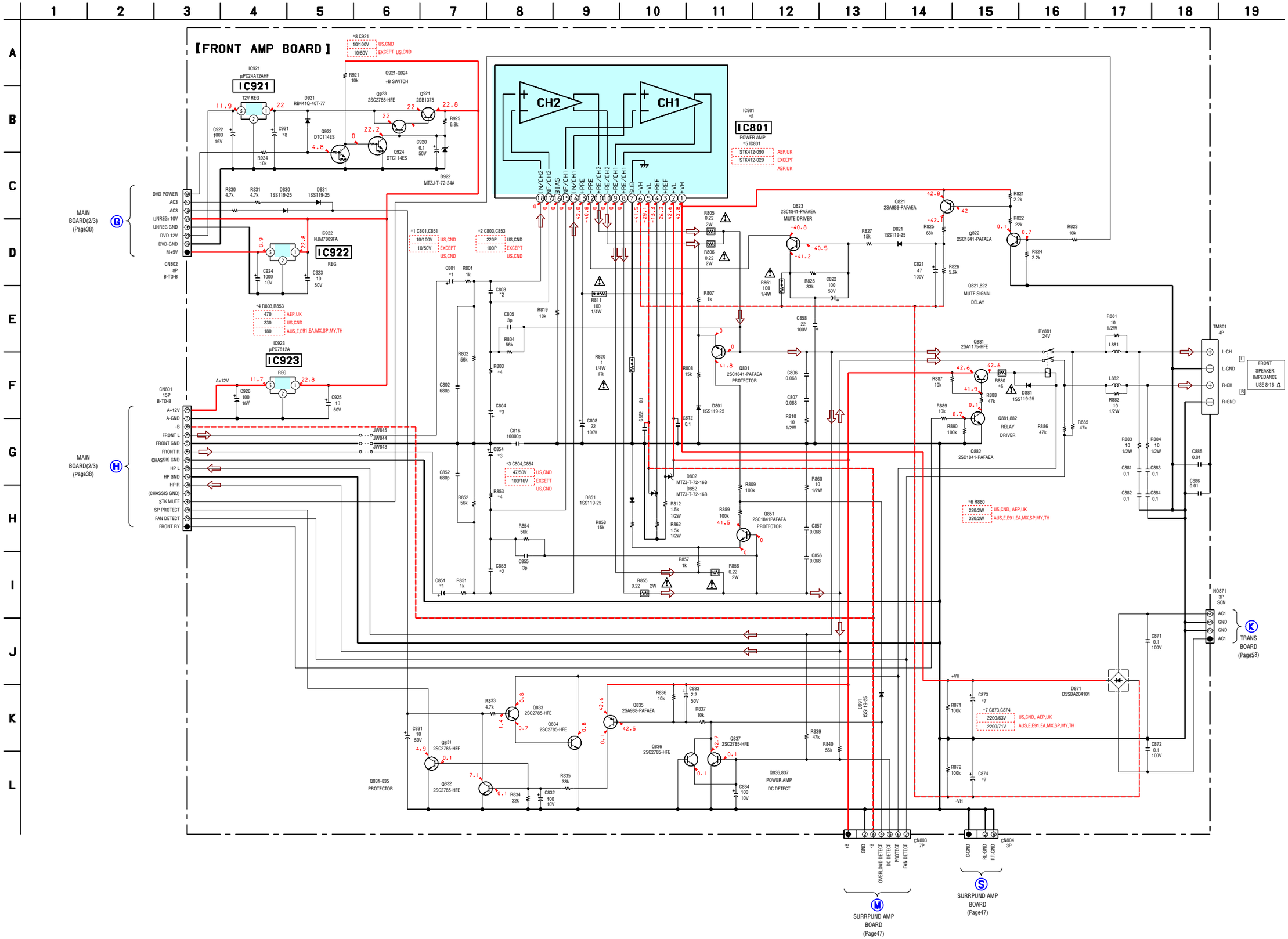
6-22. PRINTED WIRING BOARD – FRONT AMP SECTION – • See page 22 for Circuit Boards Location.



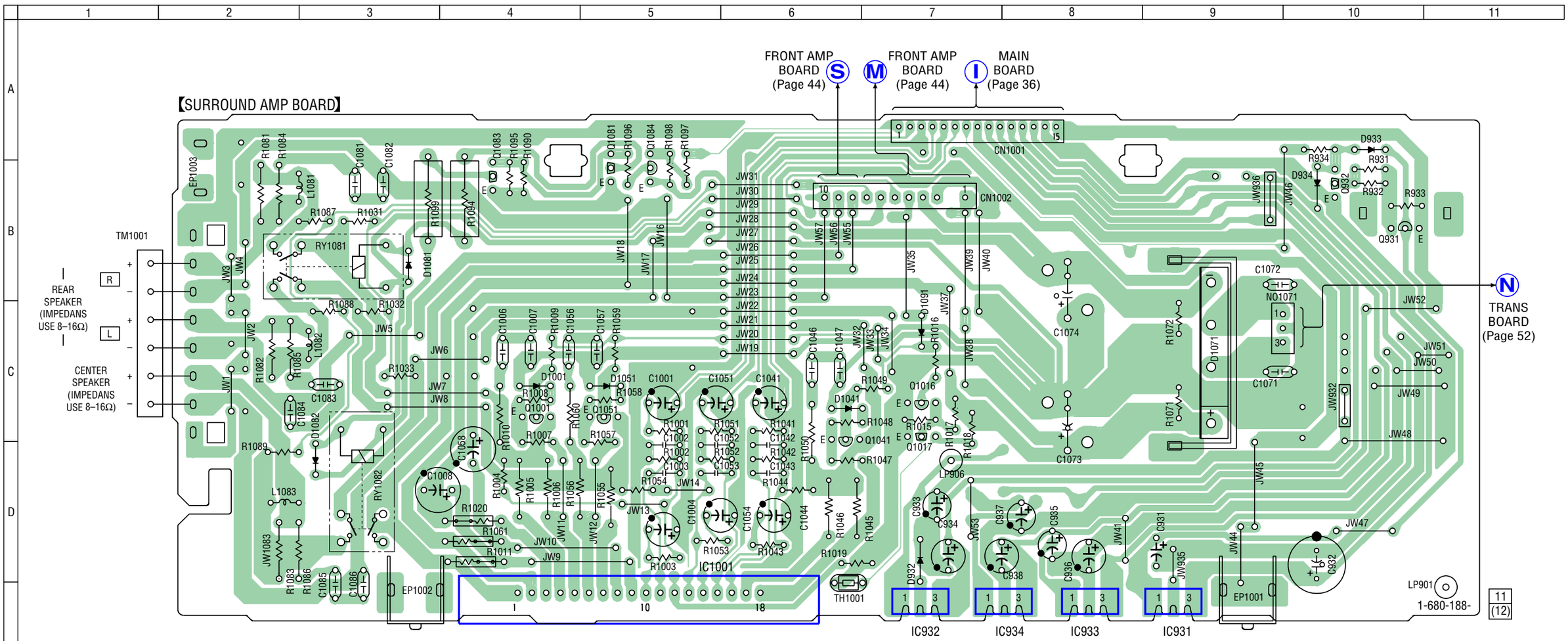
• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D801	C-6	Q801	D-7
D802	D-5	Q821	D-4
D821	D-4	Q822	C-3
D830	B-8	Q823	D-4
D831	B-8	Q831	A-8
D851	C-6	Q832	A-8
D852	D-6	Q833	A-8
D871	C-1	Q834	A-8
D881	E-8	Q835	B-9
D891	B-6	Q836	B-9
D921	D-2	Q837	A-9
D922	D-1	Q851	C-6
		Q881	D-9
IC801	E-6		
IC921	E-3		
IC922	E-3		
IC923	E-4		

6-23. SCHEMATIC DIAGRAM – FRONT AMP SECTION –



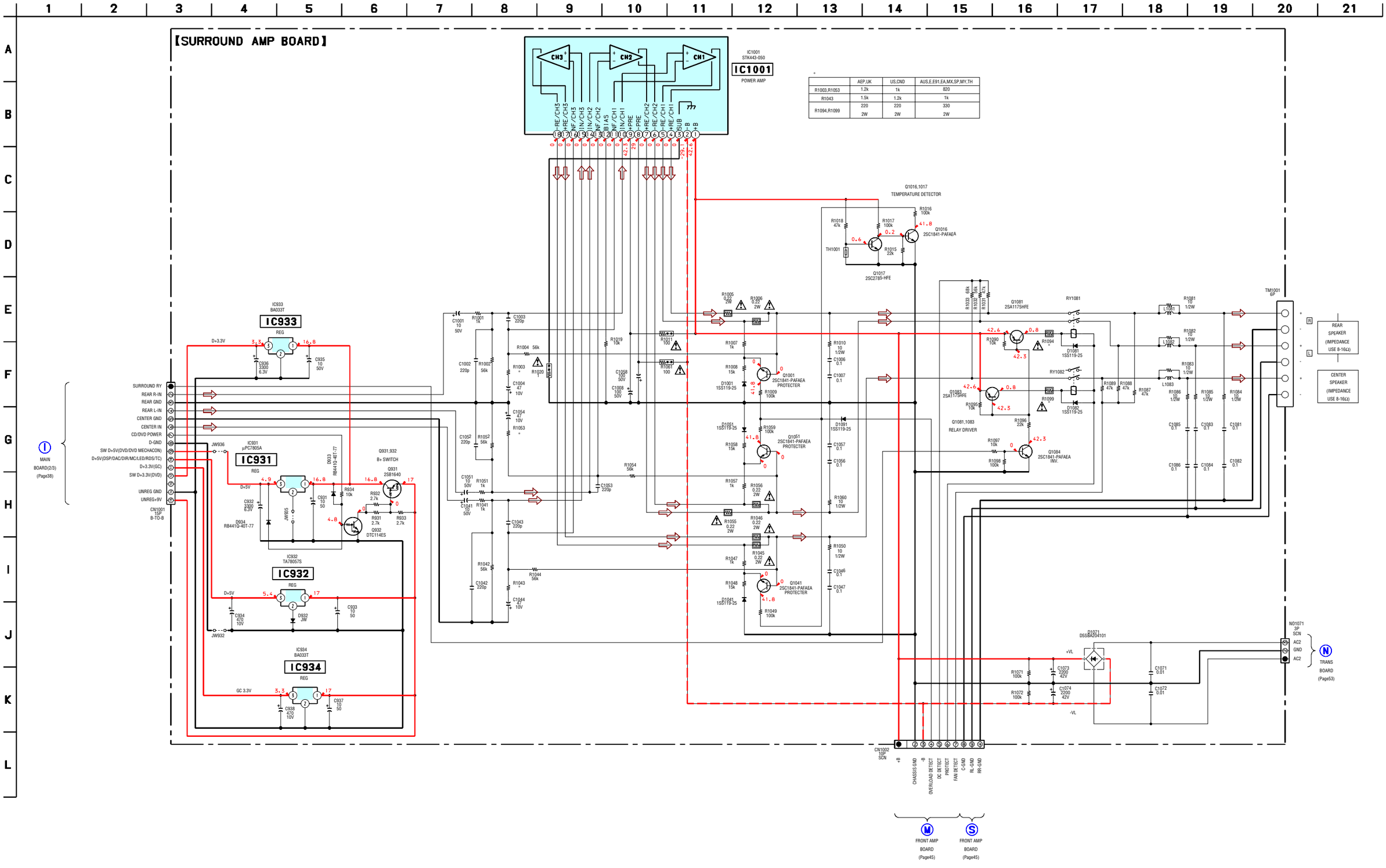
6-24. PRINTED WIRING BOARD – SURROUND AMP SECTION – • See page 22 for Circuit Boards Location.



• **Semiconductor Location**

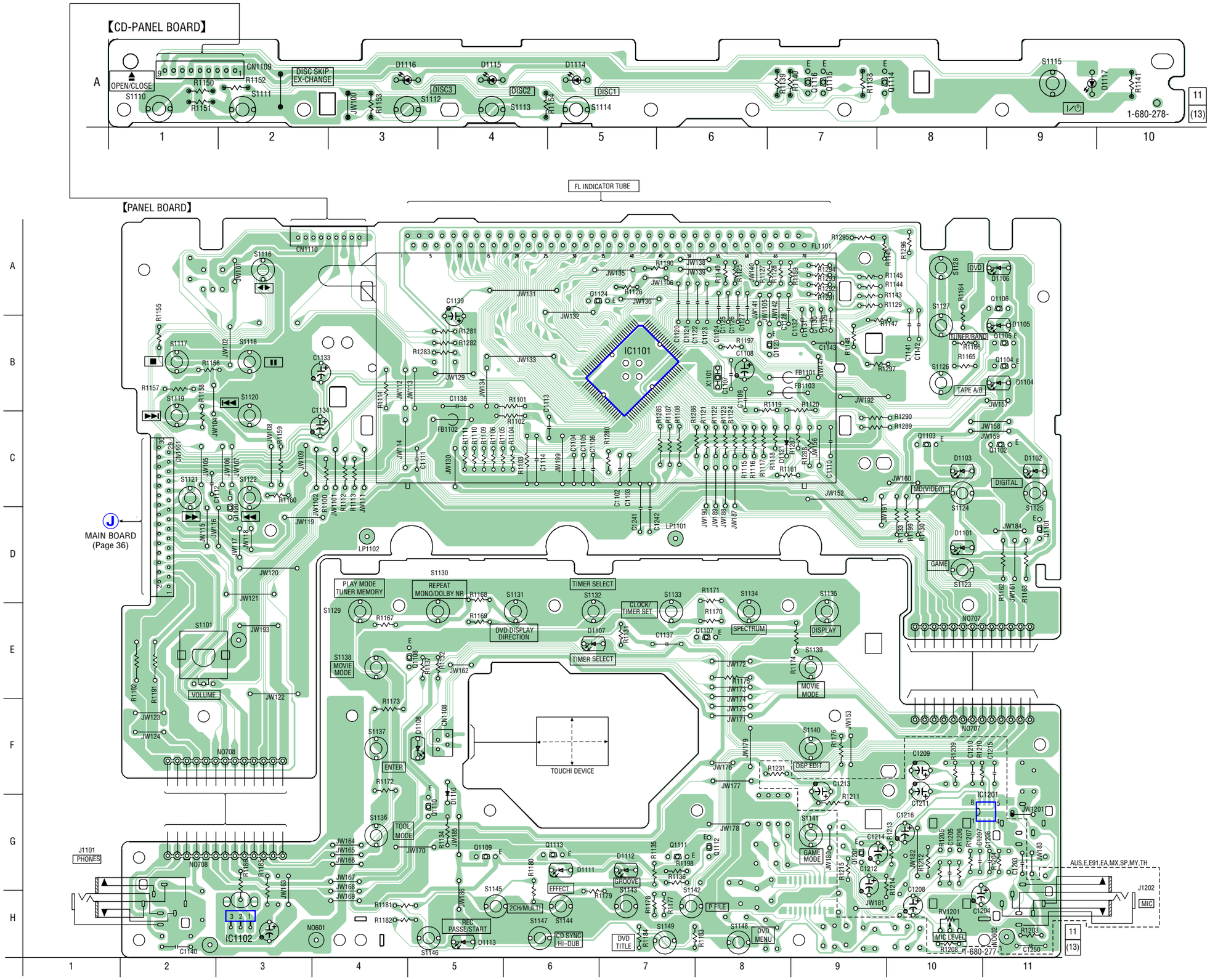
Ref. No.	Location
D933	A-10
D934	B-10
D1001	C-4
D1041	C-6
D1051	C-5
D1071	C-9
D1081	B-3
D1082	D-3
D1091	C-7
IC931	E-9
IC932	E-7
IC933	E-8
IC934	E-8
IC1001	E-5
Q931	B-10
Q932	B-10
Q1001	C-4
Q1016	C-7
Q1017	C-7
Q1041	C-6
Q1051	C-5
Q1081	B-5
Q1083	B-4
Q1084	B-5

6-25. SCHEMATIC DIAGRAM – SURROUND AMP SECTION –



	AEP,UK	US,CND	AUS,E,E91,EA,MX,SP,MY,TH
R1003,R1053	1.2k	1k	820
R1043	1.5k	1.2k	1k
R1094,R1099	220 2W	220 2W	330 2W

6-26. PRINTED WIRING BOARD – PANEL SECTION – • See page 22 for Circuit Boards Location.



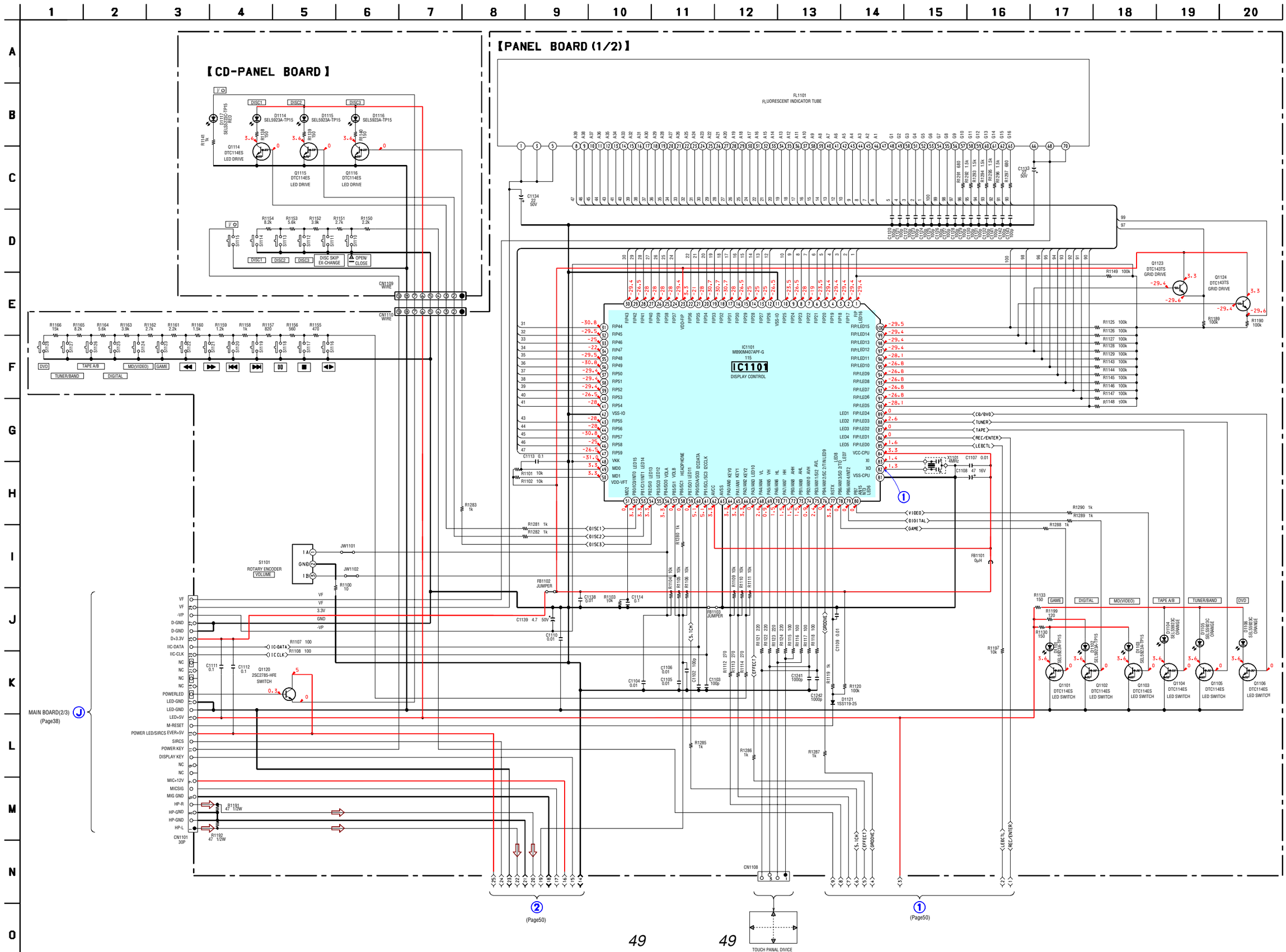
• **Semiconductor Location**

Ref. No.	Location
D1114	A-5
D1115	A-4
D1116	A-3
D1117	A-9
Q1114	A-8
Q1115	A-7
Q1116	A-7

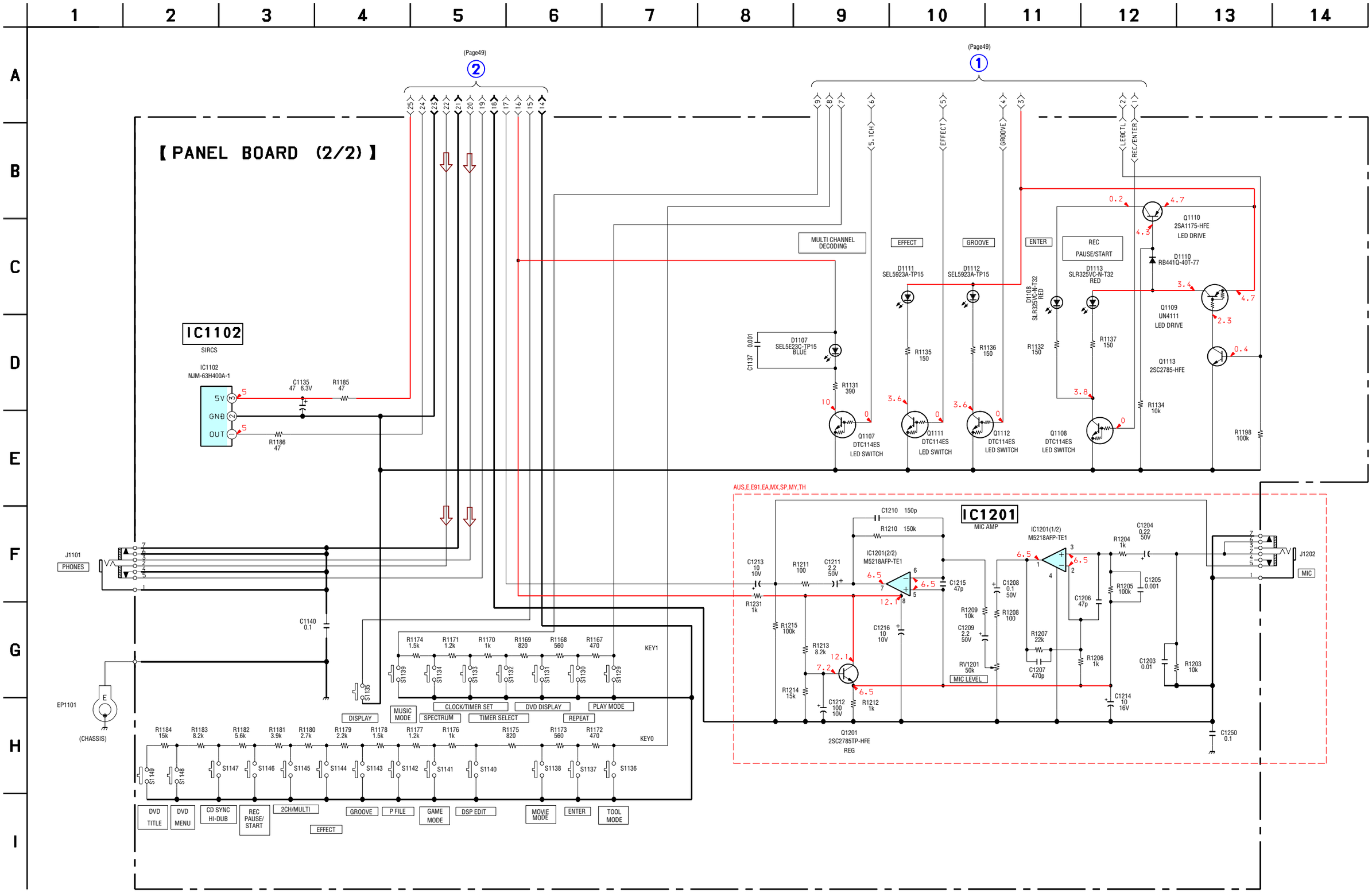
• **Semiconductor Location**

Ref. No.	Location
D1101	D-10
D1102	C-11
D1103	C-10
D1104	B-11
D1105	B-11
D1106	A-11
D1107	E-6
D1108	F-5
D1110	G-5
D1111	G-6
D1112	G-7
D1113	H-5
D1121	C-8
IC1101	B-7
IC1102	H-3
IC1201	G-11
Q1101	D-11
Q1102	C-11
Q1103	C-10
Q1104	B-11
Q1105	B-11
Q1106	A-11
Q1107	E-8
Q1108	E-5
Q1109	G-5
Q1110	G-5
Q1111	G-7
Q1112	G-8
Q1113	G-6
Q1120	D-3
Q1123	B-8
Q1124	A-6
Q1201	G-9

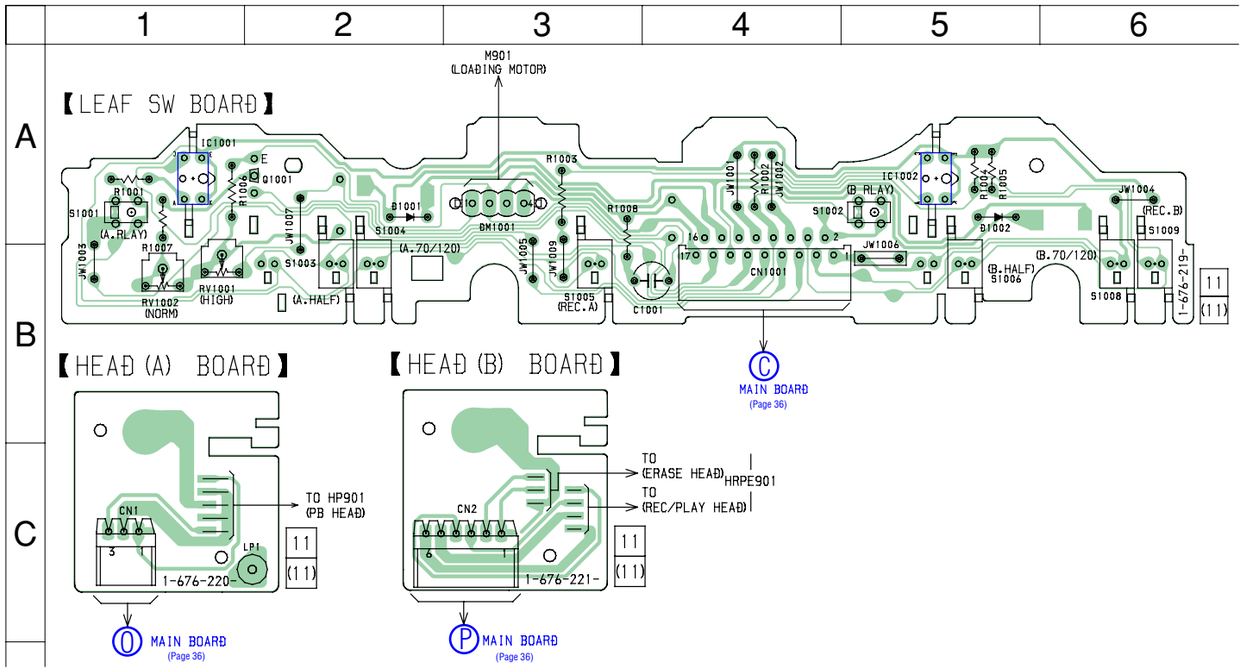
6-27. SCHEMATIC DIAGRAM – PANEL (1/2) SECTION – • See page 22 for Waveforms. • See page 58 for IC Pin Function.



6-28. SCHEMATIC DIAGRAM – PANEL (2/2) SECTION –



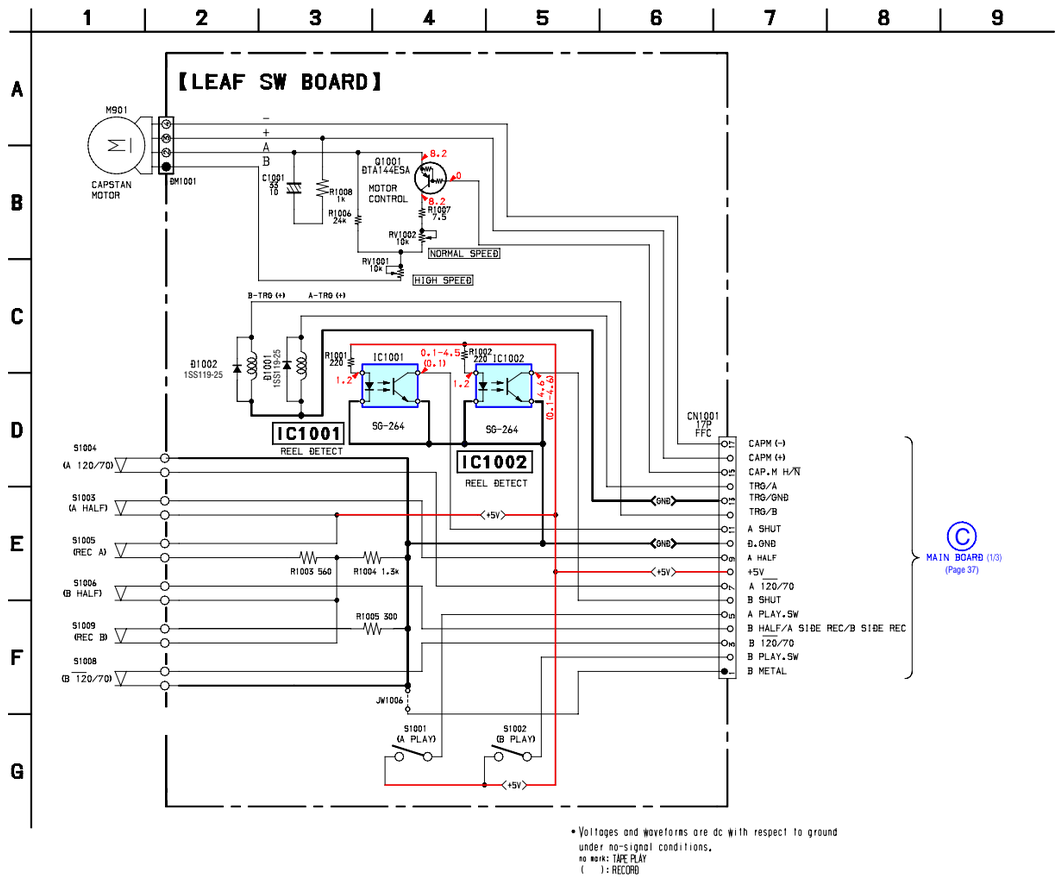
6-29. PRINTED WIRING BOARD – LEAF SW SECTION – • See page 22 for Circuit Boards Location.



• **Semiconductor Location**

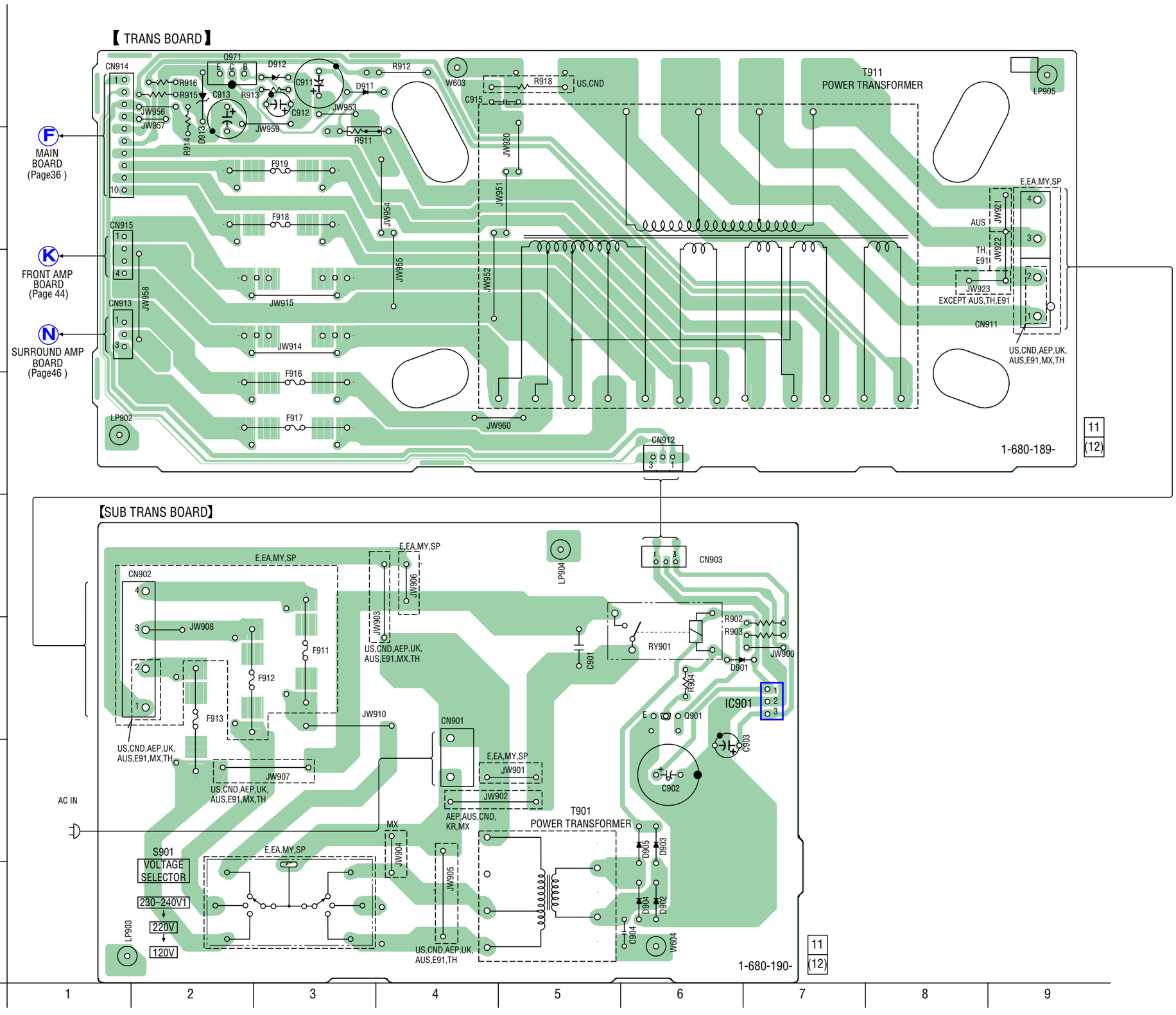
Ref. No.	Location
D1001	A-2
D1002	A-5
IC1001	A-1
IC1002	A-5
Q1001	A-2

6-30. SCHEMATIC DIAGRAM – LEAF SW SECTION –



• Voltages and waveforms are dc with respect to ground under no-signal conditions.
no mark: TAPE PLAY
( ): RECORD

6-31. PRINTED WIRING BOARD – TRANS SECTION – • See page 22 for Circuit Boards Location.



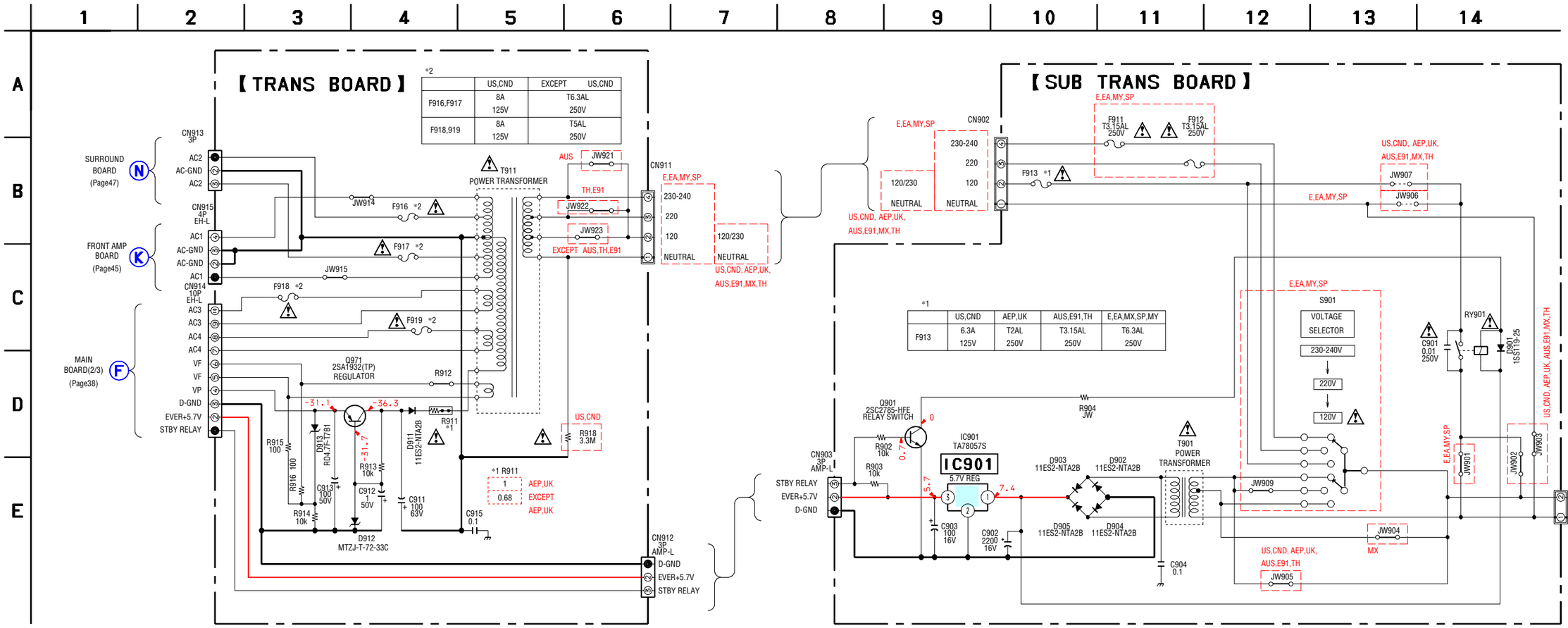
• **Semiconductor Location**

Ref. No.	Location
D911	A-3
D912	A-3
D913	A-2
Q971	A-2

• **Semiconductor Location**

Ref. No.	Location
D901	F-6
D902	H-6
D903	G-6
D904	H-6
D905	G-6
IC901	F-7
Q901	F-6

6-32. SCHEMATIC DIAGRAM – TRANS SECTION –



*2	US,CND	EXCEPT US,CND
F916,F917	8A 125V	T6.3AL 250V
F918,919	8A 125V	T5AL 250V

*1	US,CND	AEP,UK	AUS,E91,TH	E,EA,MX,SP,MY
F913	6.3A 125V	T2AL 250V	T3.15AL 250V	T6.3AL 250V

6-33. IC PIN FUNCTION DESCRIPTION

• **IC103 MB91307APFV-G-BND-E1 DVD SYSTEM CONTROL (MB BOARD (4/5))**

Pin No.	Pin Name	I/O	Description
1	HA17	O	Address bus to SRAM
2	HA18	O	Address bus to SRAM
3	HA19	O	Address bus to SRAM
4	HA20	O	Address bus to SRAM
5	HA21	O	Address bus to SRAM
6	HA22	O	Address bus to SRAM (Not used)
7	WP	O	Chip select signal output to EEPROM
8	TRM/XKRCS	O	Not used (open)
9	AVCC	I	Power supply +3.3V
10	AVRH	I	A/D reference voltage input (Connected to AVCC)
11	AVSS	—	Ground
12	AN0	I	A/D input pin (mode set)
13	AN1	I	A/D input pin (mode set)
14	AN2	I	A/D input pin (mode set)
15	AN3	I	A/D input pin (mode set)
16	INT0	I	HIREQO signal input from CXD1933Q
17	INT1	I	XINT signal input from CXD9635R
18	INT2	I	HINT signal input from CXD9635R
19	INT3	I	FGAINT signal input from LC22004A
20	INT4	I	XIFINT signal input from M30622MGA
21	INT5	I	Not used (open)
22	INT6	I	Not used (open)
23	INT7	I	Not used (open)
24	VCC	I	Power supply +3.3V
25	SI0	I	Serial data input from M30622MGA
26	SO0	O	Serial data output to M30622MGA
27	SC0	O	Clock output to M30622MGA
28	SI1	I	Not used (open)
29	SO1	O	Not used (open)
30	SC1	O	Not used (open)
31	SI2	I	Test serial data input
32	SO2	O	Test serial data output
33	DSENS	O	Not used (open)
34	VSS	—	Ground
35	XRST	O	Reset signal output
36	XARPRST	O	XARP reset signal output to CXD9635R
37	RGBSEL/MICMUTE	O	Not used (open)
38	SDA	I/O	Serial data input/output to EEPROM
39	SCL	O	Serial clock output to EEPROM
40	TRM+XKRRST	O	Not used (open)
41	EUROV/V/CLAPSW1	O	Not used (open)
42	DISCEXT/CLPSW0	O	Not used (open)
43	MD0	I	Mode signal input (connected to VCC)
44	MD1	I	Mode signal input (connected to VSS)
45	MD2	I	Mode signal input (connected to VSS)
46	DREQ0	I	DMA external transfer request input
47	DACK0	O	DMA external transfer request acknowledge output
48	XDRVMUTE	O	Mute signal output to FAN8034
49	DREQ1	I	DMA external transfer request input
50	DACK1	O	DMA external transfer request acknowledge output

Pin No.	Pin Name	I/O	Description
51	XIFCS	O	XIFCS signal output to M30622MGA
52	VSS	—	Ground
53	X1	I	External crystal terminal (16.5MHz)
54	X0	O	External crystal terminal (16.5MHz)
55	VCC	I	Power supply +3.3V
56	CKSW1	I	Not used (connected toVCC)
57	OCSW1	I	Not used (connected toVCC)
58	CS0X	O	Chip select signal output to FLASH RAM
59	CS1X	O	Not used (open)
60	CS2X	O	AVDCS2 signal output to CXD1933Q
61	CS3X	O	AVDCS3 signal output to CXD1933Q
62	CS4X	O	XARPCS signal output to CXD1933Q
63	CS5X	O	XSPDCS signal output to CXD1933Q
64	C	—	External capacitor terminal
65	CS6X	O	XFAGCS signal output to CXD1933Q
66	CS7X	O	Not used (open)
67	XWAIT	I	XWAIT signal input from CXD1933Q
68	BGRNTX	I	Not used (connected toVCC)
69	BGR	O	Not used (open)
70	XRD	O	Out enable signal output to FLASH RAM
71	XWRH	O	Write signal output to FLASH RAM
72	XWRL	O	Not used (open)
73	XMIX	I	Not used (connected toVCC)
74	HSTX	I	Not used (connected toVCC)
75	VSS	—	Ground
76	XFRRST	I	System reset input from M30622MGA
77	CPUCK	O	Clock signal output to LC22004A
78	OCSW2	I	Not used (connected toVCC)
79	XBACK	I	Not used (connected toVCC)
80	VESCS/X39CS	I	Not used (connected toVCC)
81	48/44.1K	O	Audio clock control signal output
82	WIDE	O	WIDE control signal output
83	MAMUTE	I	System OK signal input to M30622MGA
84	XLDON	O	Laser diode ON signal output
85	HD0	I/O	Data input/output to SRAM
86	HD1	I/O	Data input/output to SRAM
87	HD2	I/O	Data input/output to SRAM
88	HD3	I/O	Data input/output to SRAM
89	HD4	I/O	Data input/output to SRAM
90	HD5	I/O	Data iniput/output to SRAM
91	HD6	I/O	Data input/output to SRAM
92	HD7	I/O	Data input/output to SRAM
93	HD8	I/O	Data input/output to SRAM
94	HD9	I/O	Data input/output to SRAM
95	HD10	I/O	Data input/output to SRAM
96	HD11	I/O	Data input/output to SRAM
97	HD12	I/O	Data input/output to SRAM
98	HD13	I/O	Data input/output to SRAM
99	HD14	I/O	Data input/output to SRAM
100	HD15	I/O	Data input/output to SRAM

54

Pin No.	Pin Name	I/O	Description
101	VSS	—	Ground
102	HA0	O	Address bus to SRAM
103	HA1	O	Address bus to SRAM
104	HA2	O	Address bus to SRAM
105	HA3	O	Address bus to SRAM
106	HA4	O	Address bus to SRAM
107	HA5	O	Address bus to SRAM
108	HA6	O	Address bus to SRAM
109	HA7	O	Address bus to SRAM
110	VCC	I	Power supply +3.3V
111	HA8	O	Address bus to SRAM
112	HA9	O	Address bus to SRAM
113	HA10	O	Address bus to SRAM
114	HA11	O	Address bus to SRAM
115	HA12	O	Address bus to SRAM
116	HA13	O	Address bus to SRAM
117	HA14	O	Address bus to SRAM
118	HA15	O	Address bus to SRAM
119	VSS	—	Ground
120	HA16	O	Address bus to SRAM

• **IC401 MASTER CONTROL (M30622MGA-A72FP) (MAIN Board (2/3))**

Pin No.	Pin Name	I/O	Description
1	AMP-DATA	O	Amp data signal output
2	AMP-CLK	O	Amp clock signal output
3	AMP-LAT	O	Amp latch signal output
4	SIRCS	I	Remote commander signal input
5	DIG-Tx	O	Digital common Tx signal output
6	DSP-Rx	I	DSP Rx signal input
7	DIG-CLK	O	Digital common clock signal output
8	GND	—	Ground
9	GND	—	Ground
10	XC-IN	I	Sub clock input (32.768kHz)
11	XC-OUT	O	Sub clock output (32.768kHz)
12	RESET	I	System reset signal input
13	X-OUT	O	Main system clock output (16MHz)
14	VSS	—	Ground
15	X-IN	I	Main system clock input (16MHz)
16	VCC	I	Power supply (EVER+5V)
17	NMI	I	Not used (PULL UP EVER +5V)
18	RDS-INT	I	RDS interrupt signal input
19	SYSCS	I	System CS signal input to DVD
20	RDS-DATA	I	RDS data signal input
21	ST-MUTE	O	Tuner mute signal output
22	ST-CE	O	Tuner chip enable output
23	ST-DOUT	O	Tuner data output
24	BU PWM 3	O	Not used
25	ST-DIN	I	Tuner data input
26	BU PWM 2	O	Not used
27	ST-CLK	O	Tuner clock signal output
28	BU PWM 1	O	Not used
29	IIC_ CLK	O	IIC data bus reading clock (SCL signal)
30	IIC_ DATA	O	IIC data bus SDA signal
31	CANT USE	I	Not used
32	SQ-DATA-IN	I	CD data signal input (Not used)
33	SQ-CLK	O	CD data clock signal output (Not used)
34	SENS	I	BD Condition signal input (Not used)
35	SYS OUT	O	System data output to DVD
36	SYS IN	I	System data input from DVD
37	SYS CLK	O	System clock output to DVD
38	DVD-POWER	O	DVD power on/off switch signal output
39	STB LED	O	Stanby led /clock signals check point
40	SYS RST	O	System reset signal output to DVD
41	M-RESET	O	Master system reset signal output
42	SYSRQ	O	System REQ signal output to DVD
43	SYS OK	O	System OK signal output to DVD
44	LOAD-IN	O	Not used
45	LOAD-OUT	O	Not used
46	OPEN	O	Not used
47	FR	I	Not used
48	V MUTE	O	Video mute signal output
49	T-SENS	I	Not used
50	A TRG	O	A deck trigger control signal output

Pin No.	Pin Name	I/O	Description
51	NO-USE	I	Not used
52	B TRG	O	B deck trigger control signal output
53	AMS-IN	I	AMS signal input
54	CAPM-H/L	O	Capstan moter highi/low speed control signal output
55	CAPM-CNT 1	O	Capstan moter REV/FWD/STOP control signal output
56	A PLAY	I	A deck play detect signal input
57	B PLAY	I	B deck play detect signal input
58	TC-MUTE	O	Tape deck line mute switch signal output. mute: “H”
59	R/PB/PAS	I	REC/PB/PASS select signal input
60	NR-ON/OFF	O	DOLBY NR on/off switch signal output
61	$\overline{\text{REC-MUTE}}$	O	REC mute switch signal output (mute “L”)
62	VCC	I	Power supply(+5V)
63	SOFT-TEST	O	Soft out check point
64	VSS	—	Ground
65	BIAS	O	BIAS on/off switch signal output.
66	EQ-H/N	O	EQ high/low switch serect signal output
67	PB-A/B	O	A/B playback deck select signal output (deck A: “L”, deck B “H”)
68	$\overline{\text{ALC}}$	O	ALC switch signal output (on: “L”, off “H”)
69	TC-RELAY	O	Tape deck relay switch signal output
70	A HALF	I	A deck half detect signal input
71	LINE-MUTE	O	Line mute signal output (on “H”, off “L”)
72	STK-POWER	O	Power amplifier on/off signal output (on “H”, off “L”)
73	DISPLAY KEY	I	Display key on/off switch signal input
74	POWER KEY	I	Power key on/off switch signal input
75	DIR-UNLOCK	I	Dir pll unlock signal input (analog: “H”, DVD/Din normal: “L”)
76	DIR-CS	O	Dir cs signal output (normal “H”)
77	DIR-XSTATE	I	Dir xstate signal input (normal “H”)
78	DIR-Rx	I	Dir tx signal input
79	CODEC-SMUTE	I	Codec soft mute signal input (normal “L”, mute “H”)
80	DSP-ACK	I	DSP ACK signal input
81	DSP-CS	I	DSP CS signal input
82	DSP-DECODE	I	DSP DECODE signal input (AC-3 DTS decode “H”)
83	STBY-RELAY	O	Main power on/off switch signal output
84	FRONT-RELAY	O	Front speaker relay switch signal output
85	REAR-RELAY	O	Not used (rear speaker relay)
86	SP PROTECT	I	Front speaker protect signal input (on “L”)
87	STEREO	I	FM stereo detection signal input (stereo “L”)
88	TUNED	I	Tuning detection signal input (tuned “L”)
89	A SHUT	I	Shut off detection signal input (A deck reel pulse)
90	B SHUT	I	Shut off detection signal input (B deck reel pulse)
91	B-HALF	I	Detection input from the B deck half signal input
92	MODEL-IN	I	Destination setting terminal
93	SPEC-IN	I	Destination settnng terminal
94	FAN	O	Fan on control signal output
95	PWECK	I	Power check input
96	AVSS	—	Ground
97	POWER	O	Standby LED on/off control signal output
98	VREF	I	Reference voltage(+5V)
99	AVCC	I	Power supply (+5V)
100	AC-CUT	I	AC cut on/off check signal input

• **IC1101 DISPLAY CONTROL (MB90M407APF-G-115-BND) (PANEL Board (1/2))**

Pin No.	Pin Name	I/O	Discription
1	FIP/LED16	O	Grid drive signal output to the fluorescent indicator
2 to 5	FIP17 - 20	O	Grid drive signal output to the fluorescent indicator
6 to 10	FIP21-25	O	Segment drive signal output the flourescent indicator tube
11	VSS IO	—	Ground
12 to 22	FIP26-36	O	Segment drive signal output the flourescent indicator tube
23	VDD FIP	I	Power supply terminal (B+ VFT)
24 to 41	FIP37-54	O	Segment drive signal output the flourescent indicator tube
42	VSS IO	—	Ground
43 to 47	FIP35-59	O	Segment drive signal output the flourescent indicator tube
48	VKK	I	Power supply terminal (B- for VFT)
49	MD0	I	Chip Mode Select 0
50	MD1 VDD-VFT	I	Chip Mode Select 1
51	MD2	I	Chip Mode Select 2
52	LED15	O	LED switch signal output
53	LED14	O	LED switch signal output
54	LED13	O	LED switch signal output
55	LED12	O	LED switch signal output
56	VOL A	I	Jog dial pulse input from the rotary encoder(A phase input)
57	VOL B	I	Jog dial pulse input from the rotary encoder(B phase input)
58	HEADPHONE	I	HEAD PHONE check (“H” head phone)
59	LED11	O	LED switch signal output
60	I2C DATE	O	IIC data bus SDA signal
61	I2C CLA	O	IIC data bus reading clock signal
62	AVCC	I	Power supply terminal (analog)
63	AVSS	—	Ground (analog)
64 to 66	KEY0 - KEY2	I	KEY in terminal (A/D input)
67	LED10	O	LED switch signal output
68	VL	I/O	Touch pad control signal input/output
69	VH	I/O	Touch pad control signal input/output
70	HL	I/O	Touch pad control signal input/output
71	HH	I/O	Touch pad control signal input/output
72	AHH	I	Touch pad signal input(A/D input)
73	AHL	I	Touch pad signal input(A/D input)
74	AVH	I	Touch pad signal input(A/D input)
75	AVL	I	Touch pad signal input(A/D input)
76	LED9	O	LED switch signal output
77	RSTX	I	System reset signal input
78	LED8	O	LED switch signal output
79	LED7	O	LED switch signal output
80	LED6	O	LED switch signal output
81	VSS CPU	—	Ground
82	XO	O	Clock output (4MHz)
83	XI	I	Clock input (4MHz)
84	VCC - CPU	I	Power supply terminal
85	LED5	O	LED switch signal output
86	LED4	O	LED switch signal output
87	LED3	O	LED switch signal output
88	LED2	O	LED switch signal output
89	LED1	O	LED switch signal output
90 to 100	FIP LED5 - 15	O	Grid drive signal output to the fluorescent indicator

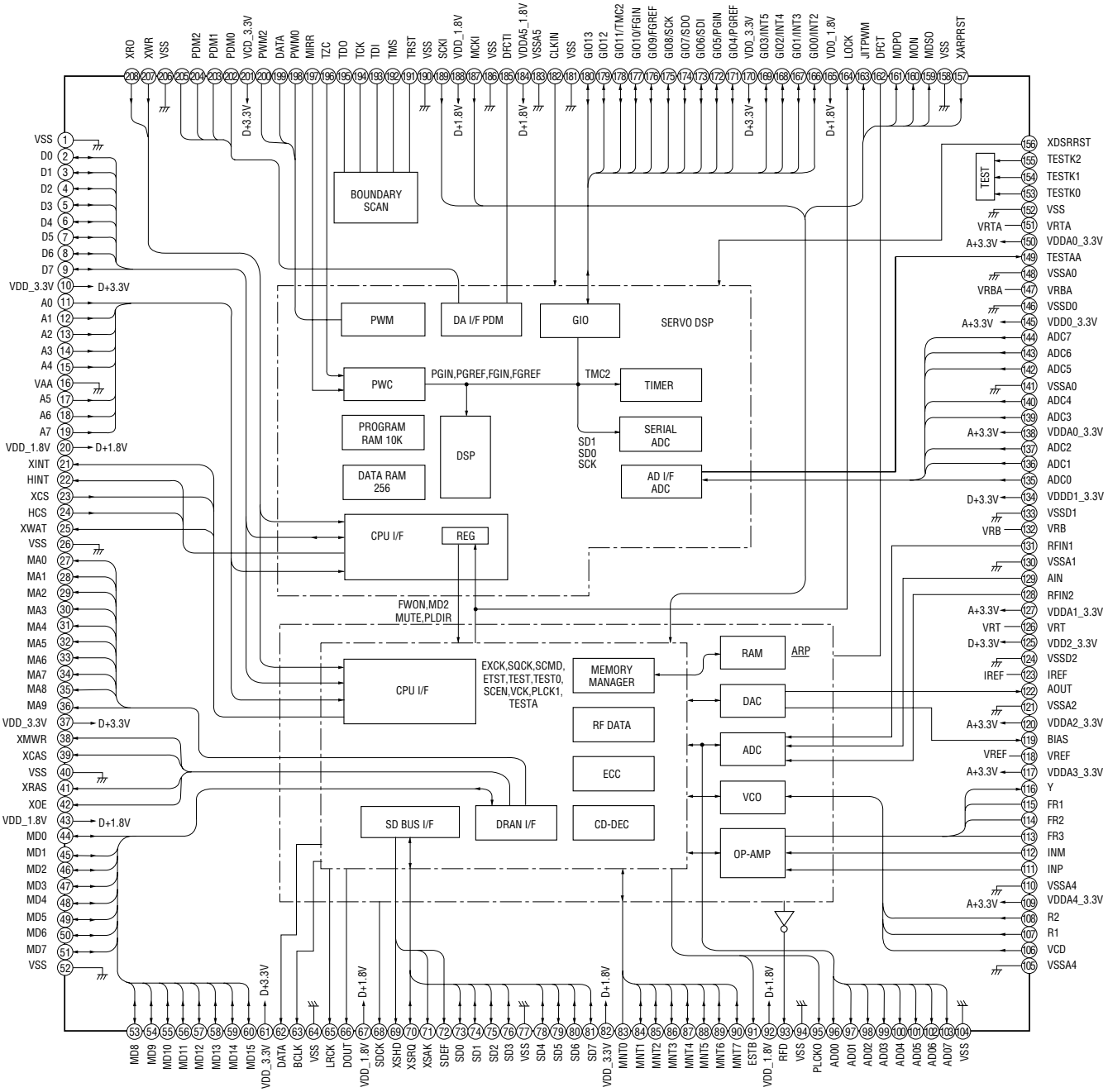
• IC601 DECODER (CXD9617R) (DSP Board (1/2))

Pin No.	Pin Name	I/O	Description
1	VSS	—	Ground
2	XRST	I	Reset signal input
3	EXTIN	—	GND
4	FS2	I	Sampling frequency switching signal input (Not used)
5	VDDI	I	Power supply
6	FS1	I	Sampling frequency switching signal input (Not used)
7	PLOCK	O	Internal PLL lock signal output (Not used)
8	VSS	—	Ground
9	MCLK1	I	Clock signal input (135 MHz)
10	VDDI	I	Power supply
11	VSS	—	Ground
12	MCLK2	O	Clock signal output
13	M/S	I	Switching of master/slave operation (Not used)
14	SCKOUT	O	Internal system clock signal output
15	LRCKI1	I/O	Sampling clock input/output for audio IF serial data (Not used)
16	VDDE	—	Power supply
17	BCKI1	I/O	Bit clock input/output terminal for audio IF serial data (Not used)
18	SDI1	I	Audio IF data input
19	LRCKO	O	Sampling clock output for audio IF serial data
20	BCKO	O	Bit clock output terminal for audio IF serial data
21	VSS	—	Ground
22	KFSIO	I/O	Audio clock signal (364fs/256fs) input/output
23 to 26	SDO1 - SDO4	O	Audio IF serial data output
27	SPDIF	O	S/D IF output (Not used)
28	LRCKI2	I	Sampling clock input for audio IF serial data
29	BCKI2	I	Bit clock input terminal for audio IF serial data
30	SDI2	I	Audio IF data input
31	VSS	—	Ground
32	HACN	O	Acknowledge signal output for host IF
33	HDIN	I	Serial data input for host IF
34	HCLK	I	Clock input for host IF
35	HDOUT	O	Serial data output for host IF
36	HCS	I	Chip select input for host IF
37	SDCLK	O	SDRAM clock output (Not used)
38	CLKEN	O	SDRAM clock enable signal output (Not used)
39	RAS	O	Raw address strobe signal output (Not used)
40	VDDI	I	Power supply
41	VSS	—	Ground
42	CAS	O	Column address strobe output (Not used)
43	DQM/OE0	O	Data input /output mask signal output (Not used)
44	CS0	O	External memory chip select (SRAM)
45	WE0	O	SRAM write enable output
46	VDDE	I	Power supply
47	WMD1	I	External memory wait mode signal input (Not used)
48	VSS	—	Ground
49	WMD0	I	External memory wait mode signal input (Not used)
50	PAGE2	O	External memory page switching signal output (Not used)
51	VSS	—	Ground
52	PAGE1	O	External memory page switching signal output (Not used)
53	PAGE0	O	External memory page switching signal output (Not used)
54	BOOT	I	Boot mode control signal input (Not used)
55	BTACT	O	Boot mode state display signal output (Not used)
56	BST	I	Boot stop signal input
57	MOD1	I	Operation mode signal input (Not used)

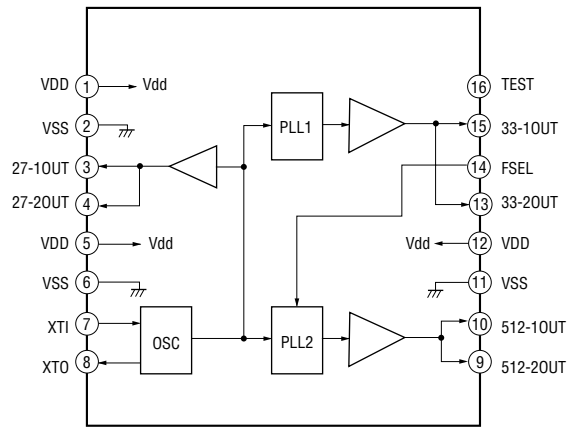
Pin No.	Pin Name	I/O	Description
58	MOD0	I	Operation mode signal input (Not used)
59	EXLOCK	I	Lock signal input
60	VDDI	I	Power supply
61	VSS	—	Ground
62, 63	A17, A16	O	External memory address output (SRAM) (Not used)
64 to 66	A15 - A13	O	External memory address output (SRAM)
67	GP10	I/O	LRCK0
68	GP9 (DECODE)	O	DECODE
69	GP8 (AUDIO)	I	AUDIO
70	VDDI	I	Power supply
71	VSS	—	Ground
72 to 75	D15 - D12	I/O	External memory data input /output (general port)
76	VDDE	I	Power supply
77 to 80	D11 - D8	I/O	External memory data input /output (general port)
81	VSS	—	Ground
82 to 85	A9 - A12	O	External memory address output (SRAM)
86	TDO	O	Simple emulation data output (Not used)
87	TMS	I	Simple emulation data input start, end terminal (Not used)
88	XTRST	I	Simple emulation async BREAK signal input terminal (Not used)
89	TCK	I	Simple emulation clock signal input (Not used)
90	TDI	I	Simple emulation data input (Not used)
91	VSS	—	Ground
92 to 97	A8 - A3	O	External memory address output (SRAM)
98, 99	D7, D6	I/O	External memory data input/output (SRAM)
100	VDDI	I	Power supply
101	VSS	—	Ground
102 to 105	D5 - D2	I/O	External memory data input/output (SRAM)
106	VDDE	I	Power supply
107, 108	D1, D0	I/O	External memory data input/output (SRAM)
109, 110	A2, A1	O	External memory address output (SRAM)
111	VSS	—	Ground
112	A0	O	External memory address output (SRAM)
113	PM	I	PLL initialization input terminal
114, 115	SDI3, SDI4	I	Audio IF data input (Not used)
116	SYNC	I	Sync/async selection input (L : sync, H : async)
117 to 119	VSS	—	Ground
120	VDDI	I	Power supply

6-34. IC BLOCK DIAGRAMS

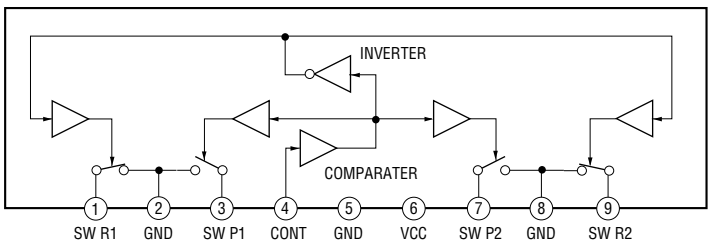
IC302 CXD9635R (MB BOARD (2/5))



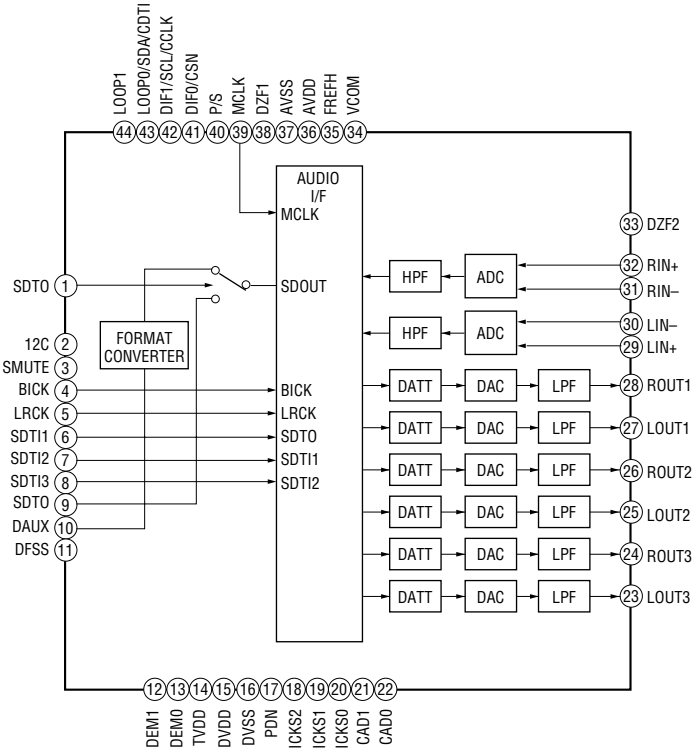
IC102 IMIC6001BTD (MB BOARD (4/5))



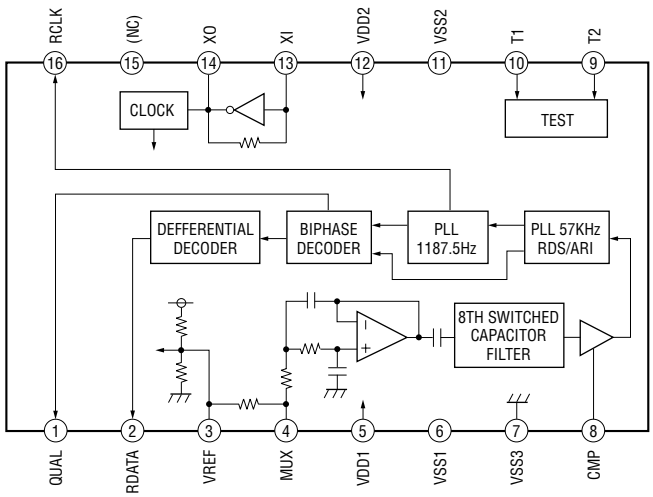
IC302 μPC1330HA (MAIN BOARD (1/3))



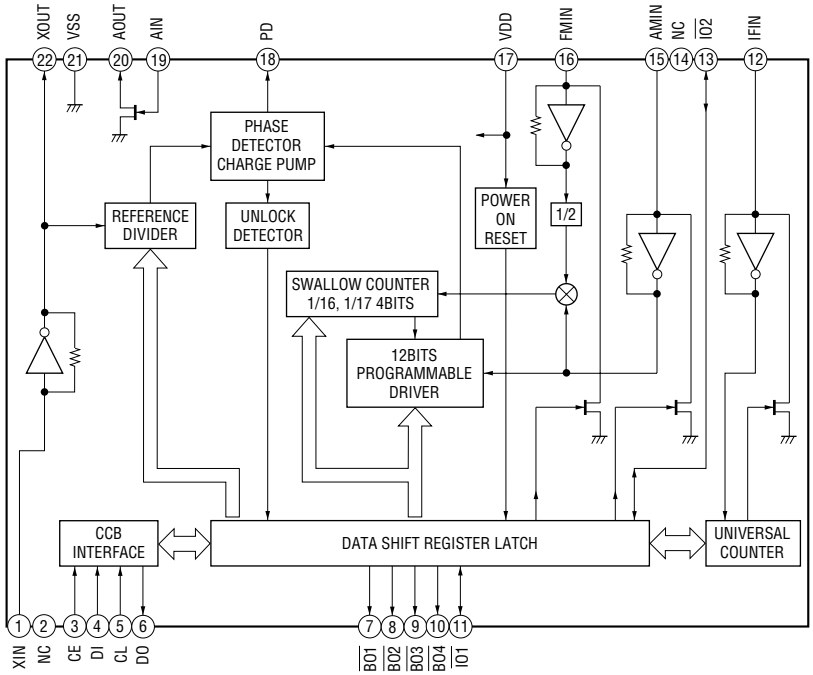
IC605 AK4527 (DSP BOARD (1/2))



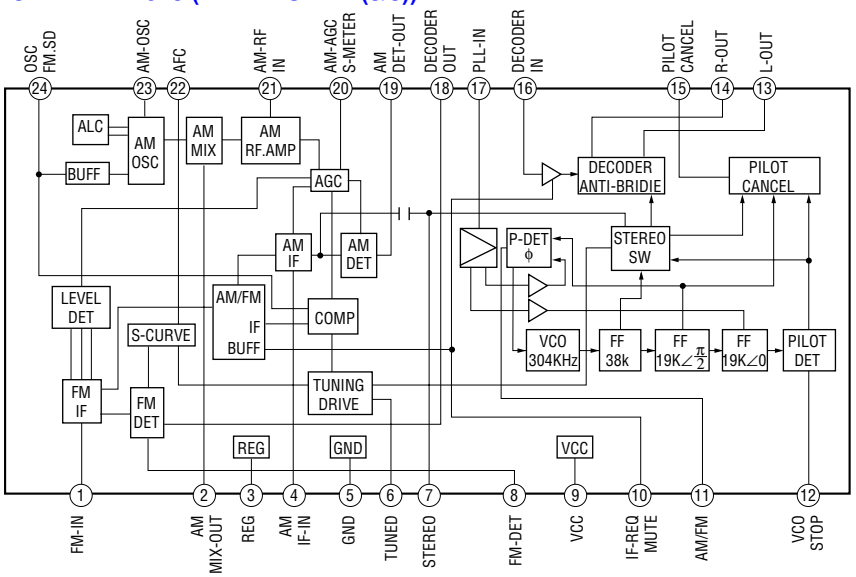
IC81 BU1924 (MAIN BOARD (3/3))



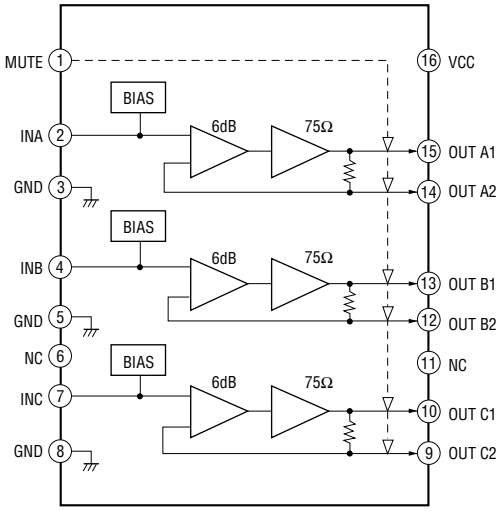
IC51 LC72131D (MAIN BOARD (3/3))



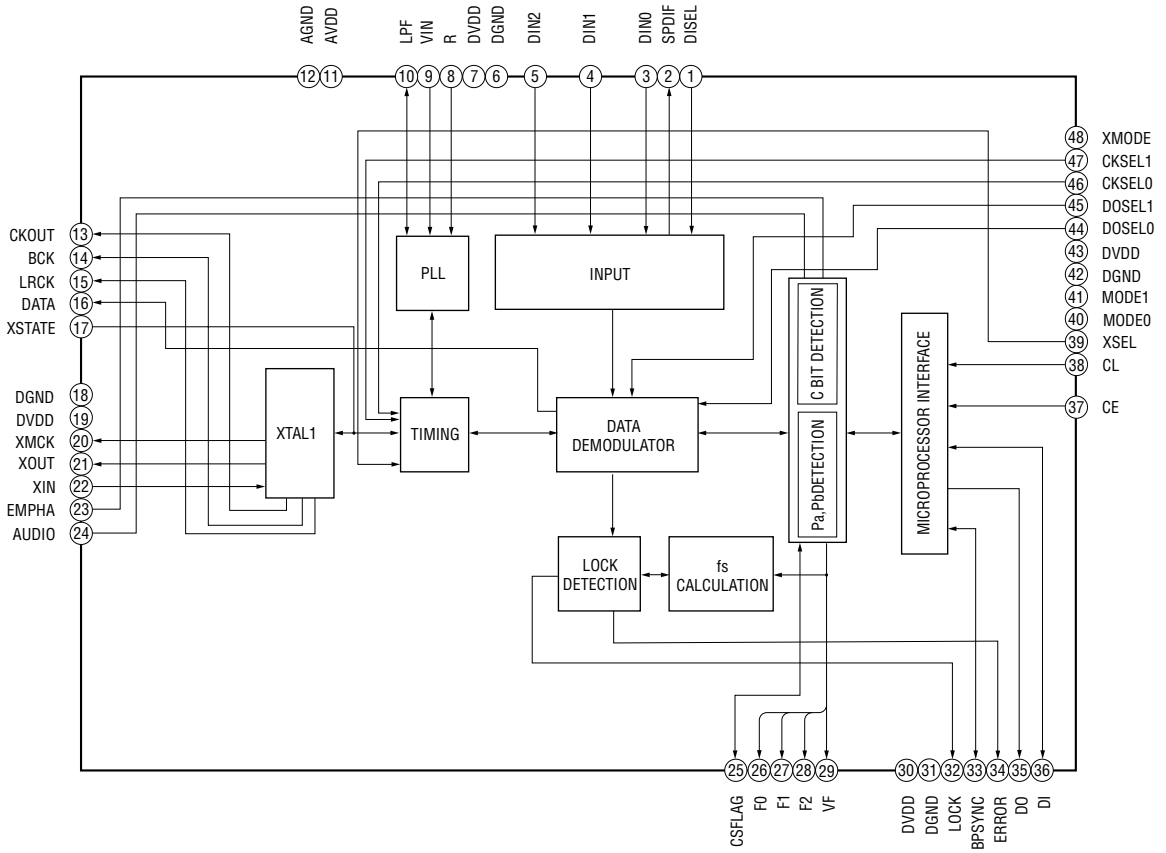
IC11 LA1845 (MAIN BOARD (3/3))



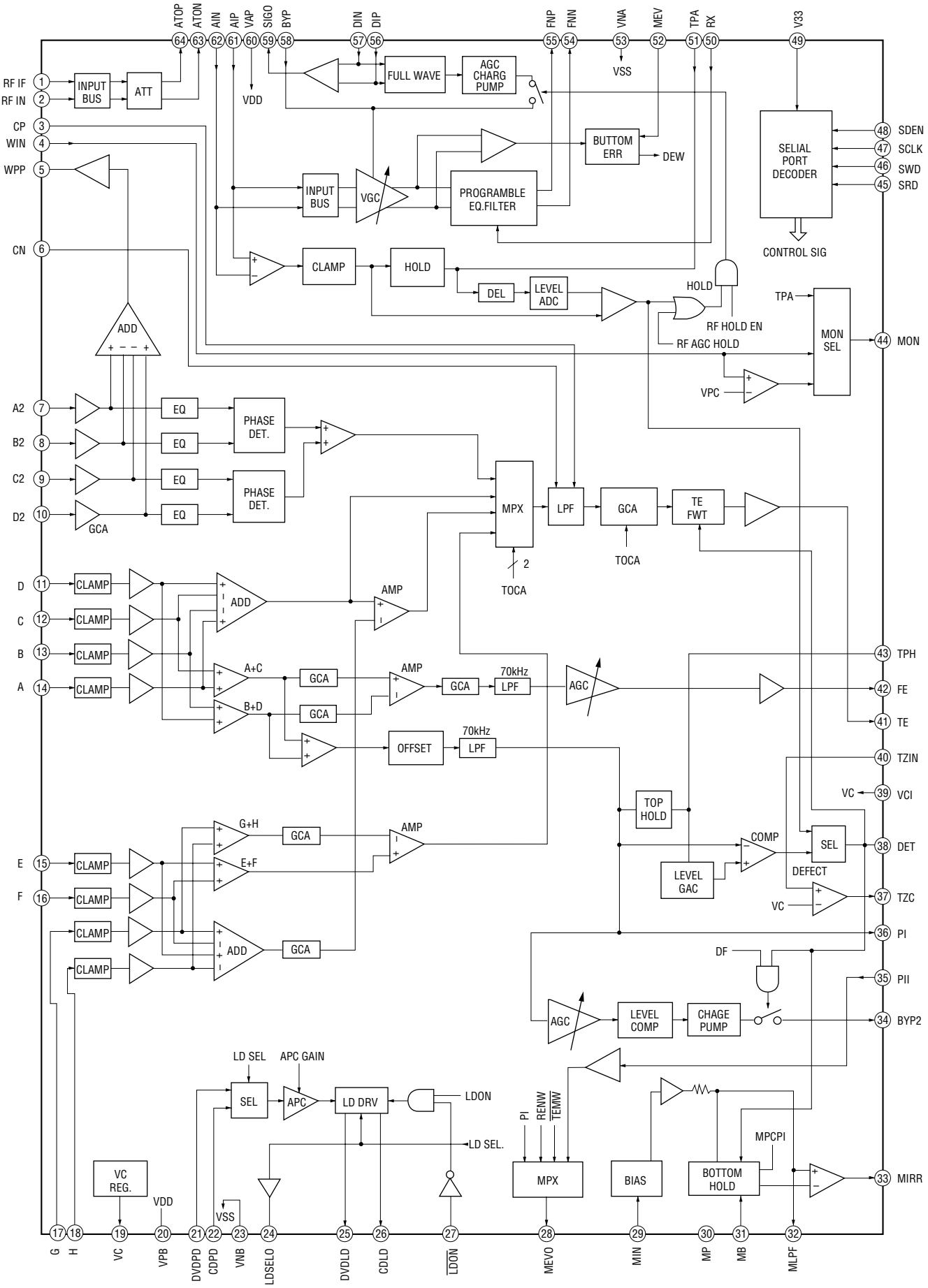
IC701 BA7666FS-E2 (MB BOARD (5/5))



IC604 LC89056W-E (DSP BOARD (2/2))



IC001 SP3728AC (RF-240 BOARD)



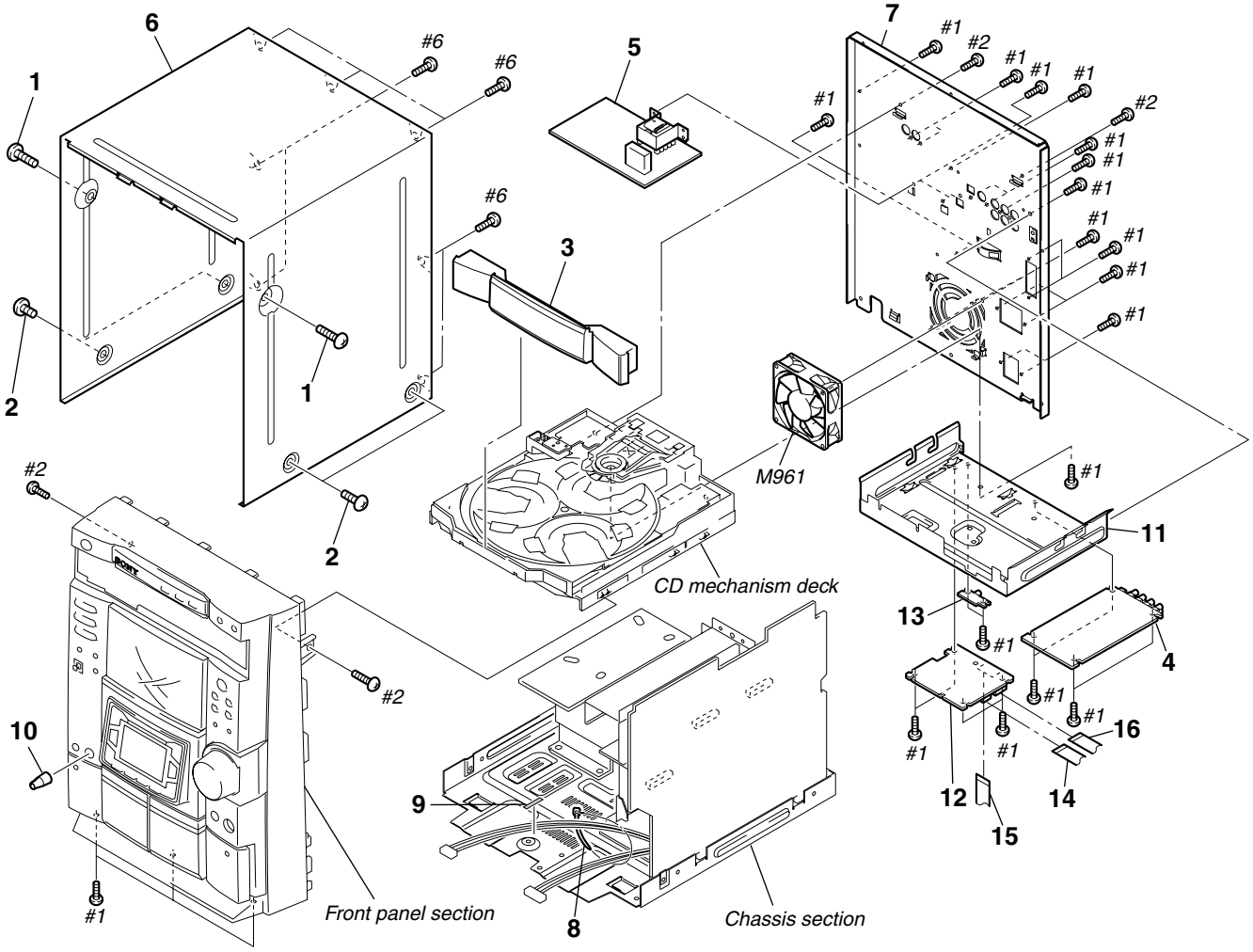
SECTION 7
EXPLODED VIEWS

NOTE:
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories are given in the last of this parts list.
- Abbreviation
  CND : Canadian model
  EA : Saudi Arabia model
  MY : Malaysia model
  SP : Singapore model
  TH : Thai model
  MX : Mexican model
  E91 : 220V AC area model
  AUS : Australian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

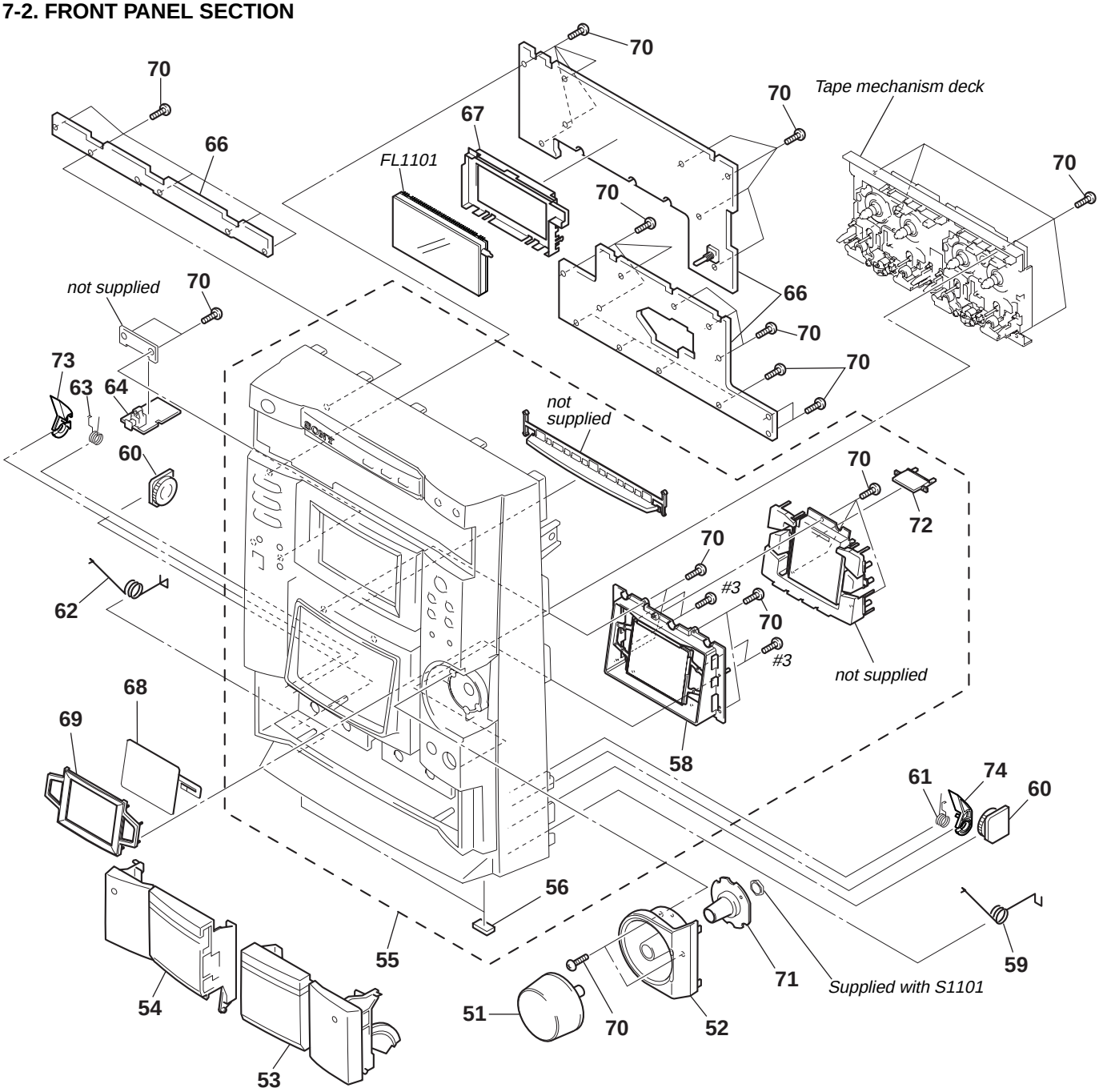
7-1. MAIN SECTION



Ref. No.	Part No.	Description	Remarks
1	3-363-099-41	SCREW (CASE 3 TP2)	
2	3-363-099-01	SCREW (CASE 3 TP2)	
3	X-4954-184-1	PANEL ASSY, LOADING (DVD)	
4	A-4475-600-A	DSP BOARD, COMPLETE (US,CND)	
4	A-4475-638-A	DSP BOARD, COMPLETE (AEP,UK)	
4	A-4475-962-A	DSP BOARD, COMPLETE (TH)	
4	A-4475-982-A	DSP BOARD, COMPLETE (AUS,E,E91,EA,MX,SP,MY)	
5	1-680-190-11	SUB TRANS BOARD	
6	4-231-828-11	CASE	
7	4-236-826-01	PANEL, BACK (US)	
7	4-236-826-11	PANEL, BACK (CND)	
7	4-236-826-21	PANEL, BACK (AEP,UK)	
7	4-236-826-31	PANEL, BACK (SP,MY)	
7	4-236-826-41	PANEL, BACK (E)	
7	4-236-826-51	PANEL, BACK (MX)	
7	4-236-826-61	PANEL, BACK (EA)	
7	4-236-826-71	PANEL, BACK (AUS)	
7	4-236-826-81	PANEL, BACK (TH)	

Ref. No.	Part No.	Description	Remarks
7	4-236-826-91	PANEL, BACK (E91)	
8	3-701-748-00	CLAMP	
* 9	3-378-109-01	CUSHION, SARANET	
10	4-231-805-02	KNOB (MIC) (AUS,E,E91,EA,MX,SP,MY,TH)	
11	4-231-835-01	BRACKET (DVD)	
12	A-4727-088-A	MB BOARD, COMPLETE (TH)	
12	A-4727-126-A	MB BOARD, COMPLETE (US,CND)	
12	A-4727-147-A	MB BOARD, COMPLETE (AEP,UK)	
12	A-4727-152-A	MB BOARD, COMPLETE (EA)	
12	A-4727-167-A	MB BOARD, COMPLETE (SP,MY)	
12	A-4727-172-A	MB BOARD, COMPLETE (AUS)	
12	A-4727-203-A	MB BOARD, COMPLETE (E,MX)	
12	A-4727-272-A	MB BOARD, COMPLETE (E91)	
13	1-682-902-11	VIDEO BOARD	
14	1-823-367-11	WIRE (FLAT TYPE) (9 CORE)	
15	1-823-370-11	WIRE (FLAT TYPE) (6 CORE)	
16	1-823-368-11	WIRE (FLAT TYPE) (25 CORE)	
M961	1-763-072-11	FAN, DC	

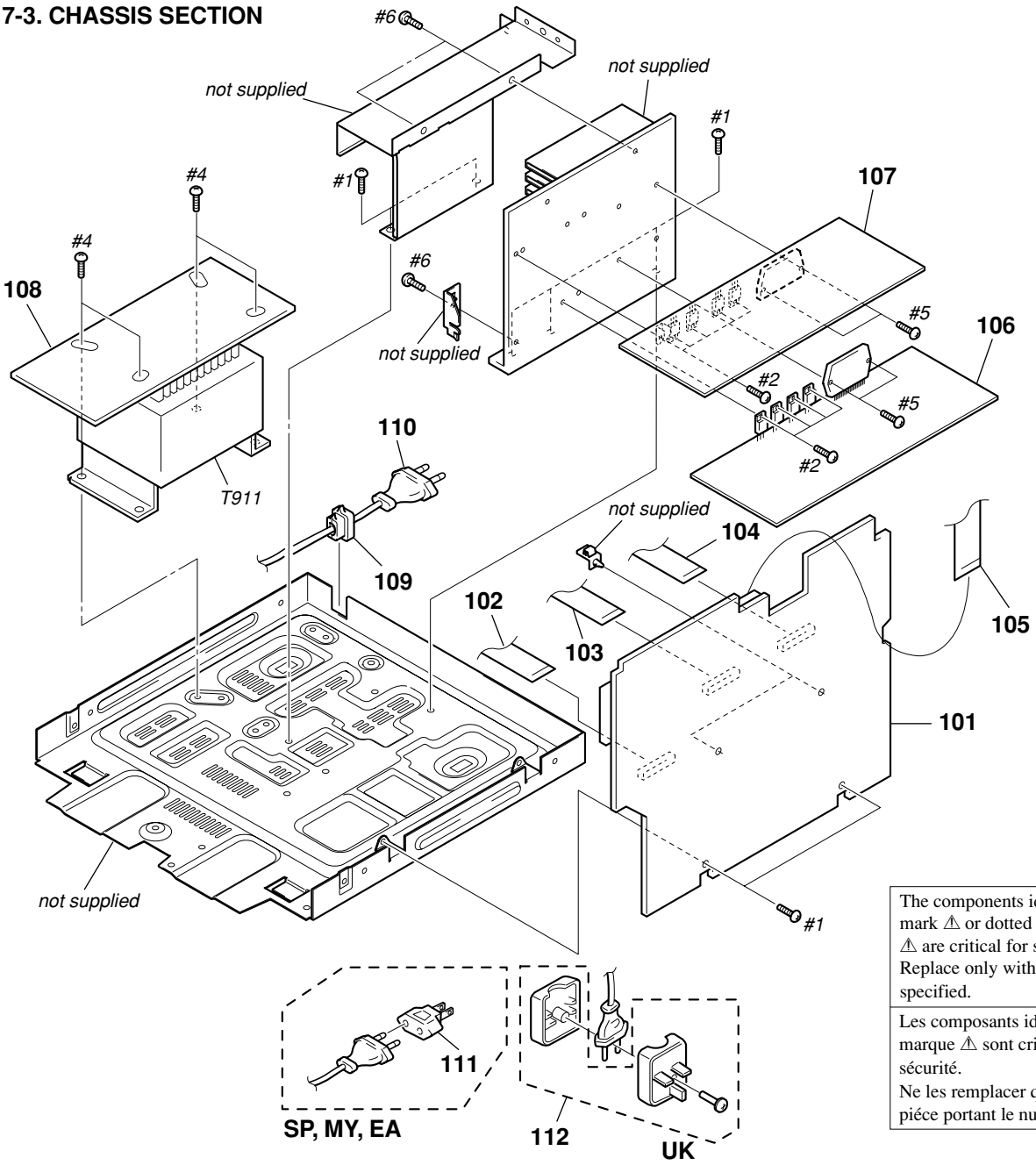
7-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remarks
51	4-231-804-01	KNOB (VOL)	
52	4-231-803-01	RING (VOL)	
53	X-4953-340-1	LID (B) ASSY, CASSETTE	
54	X-4953-339-1	LID (A) ASSY, CASSETTE	
55	X-4954-177-1	PANEL ASSY, FRONT (US)	
55	X-4954-178-1	PANEL ASSY, FRONT (AEP,UK)	
55	X-4954-179-1	PANEL ASSY, FRONT (AUS,E,E91,EA,MX,SP,MY,TH)	
55	X-4954-195-1	PANEL ASSY, FRONT (CND)	
56	4-225-252-01	CUSHION (FOOT)	
58	4-231-814-01	ESCUTCHEON (PAD)	
59	4-231-838-01	SPRING (TC-B)	
60	4-224-104-11	DAMPER	
61	4-231-841-01	SPRING (HEART CAM-B)	
62	4-231-837-01	SPRING (TC-A)	
63	4-231-836-01	SPRING (HEART CAM-A)	
64	1-680-279-11	OPT IN BOARD	

Ref. No.	Part No.	Description	Remarks
66	A-4727-117-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD) (US)	
66	A-4727-133-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD) (CND)	
66	A-4727-141-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD) (AEP,UK)	
66	A-4727-155-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD) (AUS,E,E91,EA,MX,SP,MY)	
66	A-4727-219-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD) (TH)	
67	4-224-584-01	HOLDER FL	
68	1-796-001-11	TOUCH PAD	
69	4-231-815-01	HOLDER (PAD)	
70	4-951-620-01	SCREW (2.6X8), +BVTP	
71	4-234-763-01	COVER (VOL)	
72	4-231-818-01	INDICATOR (BLUE)	
73	4-231-824-01	HEART CAM (A)	
74	4-231-825-01	HEART CAM (B)	
FL1101	1-518-722-11	INDICATOR TUBE, FLUORESCENT	

7-3. CHASSIS SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

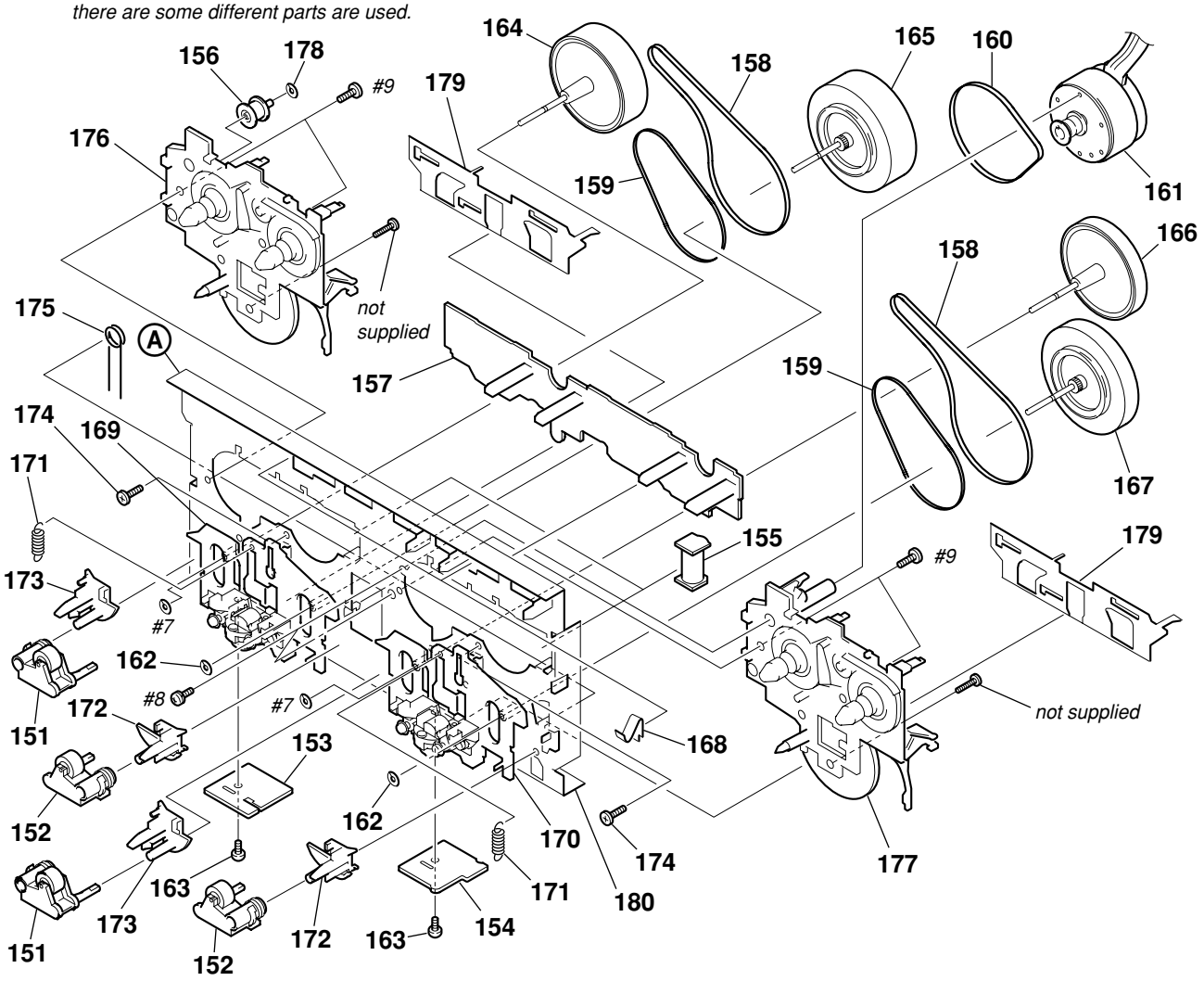
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
101	A-4727-119-A	MAIN BOARD, COMPLETE (US,CND)	
101	A-4727-143-A	MAIN BOARD, COMPLETE (AEP,UK)	
101	A-4727-150-A	MAIN BOARD, COMPLETE (EA)	
101	A-4727-163-A	MAIN BOARD, COMPLETE (AUS,E91,SP,MY)	
101	A-4727-201-A	MAIN BOARD, COMPLETE (E,MX)	
101	A-4727-227-A	MAIN BOARD, COMPLETE (TH)	
102	1-773-042-11	WIRE (FLAT TYPE) (17 CORE)	
103	1-757-419-11	WIRE (FLAT TYPE) (21 CORE)	
104	1-757-420-11	WIRE (FLAT TYPE) (23 CORE)	
105	1-823-369-11	WIRE (FLAT TYPE) (12 CORE)	
106	A-4727-111-A	FRONT AMP BOARD, COMPLETE (US,CND)	
106	A-4727-135-A	FRONT AMP BOARD, COMPLETE (AEP,UK)	
106	A-4727-161-A	FRONT AMP BOARD, COMPLETE (AUS,E91,EA,SP,MY)	
106	A-4727-199-A	FRONT AMP BOARD, COMPLETE (E,MX)	
106	A-4727-221-A	FRONT AMP BOARD, COMPLETE (TH)	
107	A-4727-113-A	SURROUND AMP BOARD, COMPLETE(US,CND)	
107	A-4727-137-A	SURROUND AMP BOARD, COMPLETE (AEP,UK)	
107	A-4727-157-A	SURROUND AMP BOARD, COMPLETE (AUS,E91,EA,SP,MY)	
107	A-4727-197-A	SURROUND AMP BOARD, COMPLETE (E,MX)	
107	A-4727-223-A	SURROUND AMP BOARD, COMPLETE (TH)	
108	1-680-189-11	TRANS BOARD	
109	3-703-571-11	BUSHING (S) (4516), CORD (E,MX,TH)	
* 109	3-703-244-00	BUSHING (2104), CORD (EXCEPT E,MX,TH)	
⚠110	1-777-071-81	CORD, POWER (AEP,E91,EA,SP,MY,UK)	
⚠110	1-783-203-11	CORD, POWER (AUS)	
⚠110	1-783-531-31	CORD, POWER (CND,US)	
⚠110	1-791-901-11	CORD, POWER (E,MX,TH)	
⚠111	1-569-008-21	ADAPTOR, CONVERSION (EA,SP,MY)	
⚠112	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
⚠T911	1-437-510-11	TRANSFORMER, POWER (US,CND)	
⚠T911	1-437-511-11	TRANSFORMER, POWER (AEP,UK)	
⚠T911	1-437-512-11	TRANSFORMER, POWER (AUS,E,E91,EA,MX,SP,MY,TH)	

7-4. TAPE MECHANISM DECK SECTION-1 (TCM-230MWR41)

• The thing that a part Ⓐ curves is TCM-230MWR41.

Note: *Two different types of tape mechanism are used depending on models. They maintain compatibility as an entire mechanism even though there are some different parts are used.*



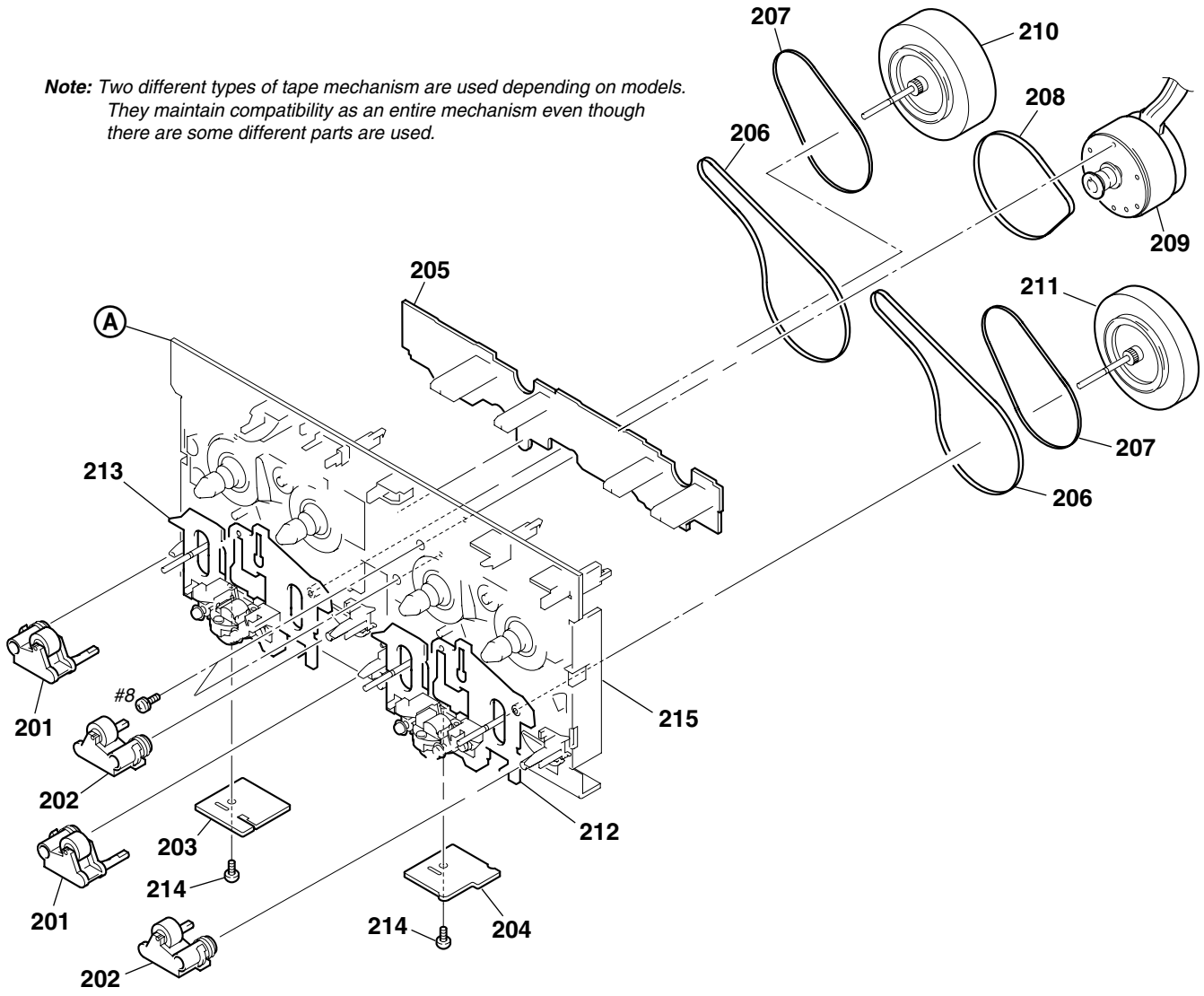
Ref. No.	Part No.	Description	Remarks
151	X-3374-156-4	PINCH LEVER (REV) ASSY	
152	X-3374-155-5	PINCH LEVER (FWD) ASSY	
153	A-2007-839-A	HEAD (A) MOUNTED PC BOARD	
154	A-2007-840-A	HEAD (B) MOUNTED PC BOARD	
155	1-454-887-32	SOLENOID, PLUNGER	
156	3-040-580-02	PULLEY (TENSION)	
157	A-2007-838-A	LEAF SW BOARD, COMPLETE	
158	3-041-946-01	BELT (CAPSTAN B)	
159	3-041-947-01	BELT (FR)	
160	4-227-239-01	BELT (CAPSTAN C)	
161	X-3378-241-1	MOTOR ASSY	
162	3-019-208-01	WASHER, STOPPER	
163	4-227-872-11	SCREW (+PTT 2X4), GROUND POINT	
164	X-3378-041-1	FLYWHEEL (A-REV) ASSY	
165	X-3378-040-1	FLYWHEEL (A-FWD) ASSY	

Ref. No.	Part No.	Description	Remarks
166	X-3378-043-1	FLYWHEEL (B-REV) ASSY	
167	X-3378-042-1	FLYWHEEL (B-FWD) ASSY	
168	4-229-083-01	SPRING (CASSETTE), LEAF	
169	A-2004-771-A	BASE (A) ASSY, HEAD	
170	A-2004-772-A	BASE (B) ASSY, HEAD	
171	3-016-574-11	SPRING (HEAD), TENSION	
172	3-016-564-01	BASE (PINCH LEVER FWD)	
173	3-016-565-01	BASE (PINCH LEVER REV)	
174	3-703-454-21	SCREW (1.7X6), TAPPING	
175	4-228-449-01	SPRING (REVERSE SLIDER)	
176	A-2004-793-A	CHASSIS (A) ASSY, SUB	
177	A-2004-794-A	CHASSIS (B) ASSY, SUB	
178	3-016-533-01	WASHER (FR), STOPPER	
179	3-016-566-01	SLIDER, REVERSE	
180	A-2004-773-A	CHASSIS ASSY, MAIN	

7-5. TAPE MECHANISM DECK SECTION-2 (TCM-230AWR41)

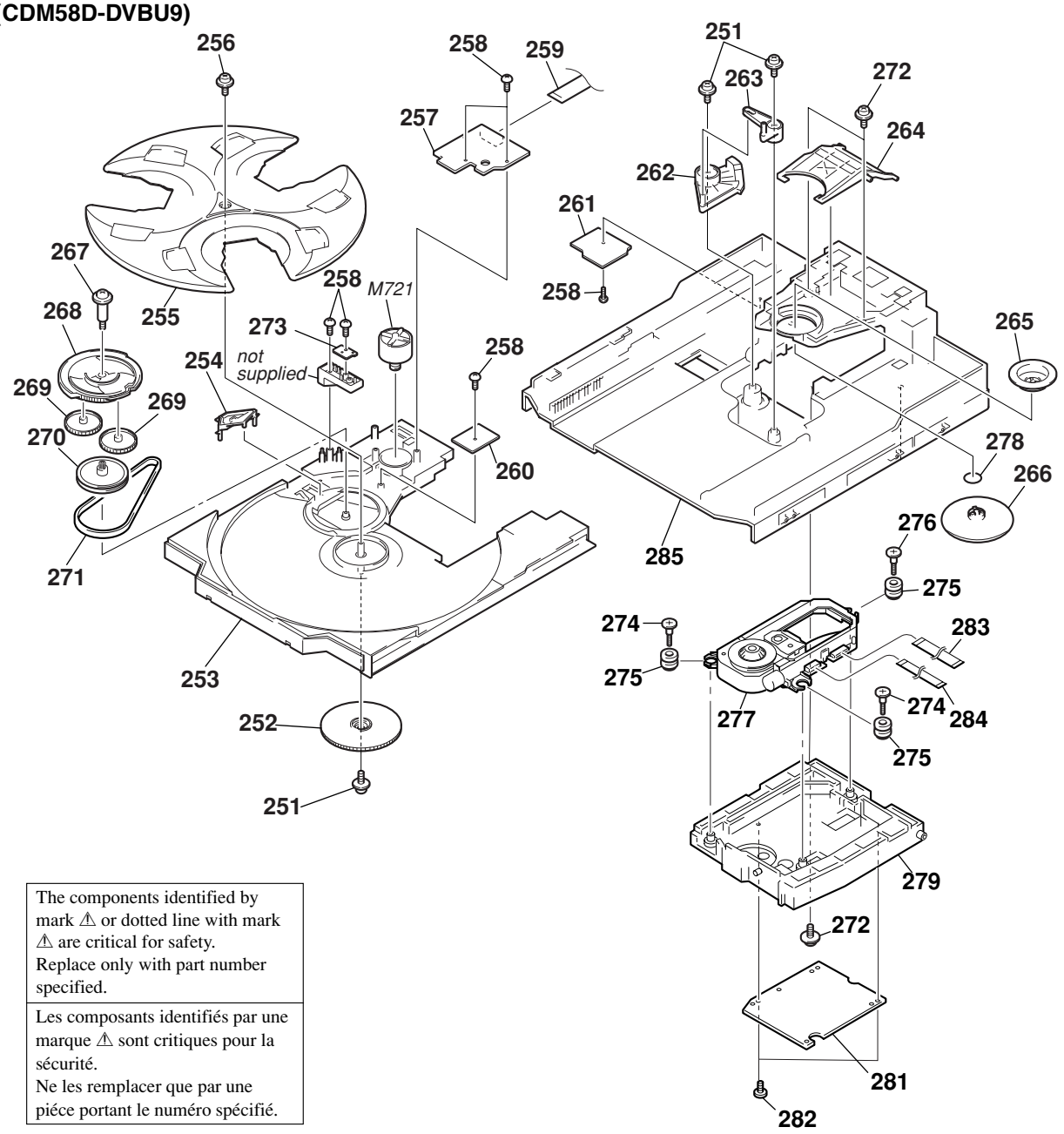
• The thing that a part Ⓐ doesn't curve is TCM-230AWR41.

Note: *Two different types of tape mechanism are used depending on models. They maintain compatibility as an entire mechanism even though there are some different parts are used.*



Ref. No.	Part No.	Description	Remarks
201	X-3374-156-5	PINCH LEVER (REV) ASSY	
202	X-3374-155-4	PINCH LEVER (FWD) ASSY	
203	A-2007-839-A	HEAD (A) MOUNTED PC BOARD	
204	A-2007-840-A	HEAD (B) MOUNTED PC BOARD	
205	A-2007-838-A	LEAF SW BOARD, COMPLETE	
206	3-041-946-01	BELT (CAPSTAN B)	
207	3-041-947-01	BELT (FR)	
208	4-227-239-01	BELT (CAPSTAN C)	
209	X-3378-241-1	MOTOR ASSY	
210	X-3378-040-1	FLYWHEEL (A-FWD) ASSY	
211	X-3378-042-1	FLYWHEEL (B-FWD) ASSY	
212	A-2004-755-A	BASE (B) ASSY, HEAD	
213	A-2004-754-A	BASE (A) ASSY, HEAD	
214	4-227-872-11	SCREW (+PTT 2X4), GROUND POINT	
215	A-2004-792-A	CHASSIS ASSY, MAIN	

7-6. DVD MECHANISM DECK SECTION (CDM58D-DVBU9)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks
251	4-933-134-51	SCREW (+PTPWH 2.6X8)	
252	4-221-679-01	CAM (RELAY)	
253	4-231-452-02	TABLE (NEW)	
254	4-221-686-01	LEVER (CHANGE)	
255	4-236-286-01	TRAY (DVD)	
256	4-933-134-11	SCREW (+PTPWH M2.6X8)	
257	1-682-791-11	MOTOR BOARD	
258	4-951-620-01	SCREW (2.6X8), +BVTP	
259	1-791-983-12	WIRE (FLAT TYPE) (8 CORE)	
260	1-682-792-11	SENSOR BOARD	
261	1-682-790-11	DRIVER BOARD	
262	X-4952-608-3	CAM (U/D) ASSY	
263	4-221-681-01	LEVER (EX)	
264	4-221-682-01	LEVER (LIFTER)	
265	4-233-594-01	PULLEY (B) (DVD), CHUCKING	
266	X-4954-450-1	PULLEY (240) ASSY	
267	4-222-097-01	SCREW, STEP	
268	4-221-678-06	CAM (CONTROL)	

Ref. No.	Part No.	Description	Remarks
269	4-221-683-01	GEAR (U)	
270	4-221-685-01	PULLEY (S)	
271	4-222-095-01	BELT	
272	4-985-672-01	SCREW (+PTPWH M2.6), FLOATING	
273	1-682-793-11	DIODE BOARD	
274	4-237-218-01	SCREW (10), STEP	
275	3-053-847-01	INSULATOR	
276	4-236-450-01	SCREW (L), STEP	
⚠277	8-820-144-06	OPTICAL PICK-UP KHM-240AAA (TYPE A)	
⚠277	A-6062-709-A	SERVICE ASSY, KHM-270AAA (TYPE B)	
278	3-053-844-01	YOKE	
279	X-4954-056-1	HOLDER (DVD) ASSY	
281	A-4726-861-A	RF-240 BOARD, COMPLETE	
282	3-341-549-01	SCREW(2.6X12)(DIA.7.5),+PTP WH	
283	1-823-621-11	CABLE, FLEXIBLE FLAT (26 CORE)	
284	1-823-622-11	WIRE (FLAT TYPE) (9 CORE)	
285	4-221-674-03	CHASSIS	
M721	A-4672-826-A	MOTOR ASSY	

SECTION 8
ELECTRICAL PARTS LIST

CD PANEL | DIODE | DRIVER | DSP

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- CAPACITORS:
  uF: µF
- RESISTORS
  All resistors are in ohms.
  METAL: metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- COILS
  uH: µH
- SEMICONDUCTORS
  In each case, u: µ, for example:
  uA...: µA... , uPA... , µPA... ,
  uPB... , µPB... , uPC... , µPC... ,
  uPD..., µPD...
- Abbreviation
  CND : Canadian model
  EA : Saudi Arabia model
  MY : Malaysia model
  SP : Singapore model
  TH : Thai model
  MX : Mexican model
  E91 : 220V AC area model
  AUS : Australian model
- Refer to servicing notes (page 5) for discrimination of TYPE A/B.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remarks
		CD PANEL BOARD (included in PANEL BOARD)			
		**********			
		< DIODE >			
D1114	8-719-057-97	DIODE SEL5923A-TP15 (DISC 1)			
D1115	8-719-057-97	DIODE SEL5923A-TP15 (DISC 2)			
D1116	8-719-057-97	DIODE SEL5923A-TP15 (DISC 3)			
D1117	8-719-071-44	DIODE SELS5223C-TP15 (I/⏻)			
		< TRANSISTOR >			
Q1114	8-729-900-80	TRANSISTOR DTC114ES			
Q1115	8-729-900-80	TRANSISTOR DTC114ES			
Q1116	8-729-900-80	TRANSISTOR DTC114ES			
		< RESISTOR >			
R1138	1-249-407-11	CARBON	150	5% 1/4W F	
R1139	1-249-407-11	CARBON	150	5% 1/4W F	
R1140	1-249-407-11	CARBON	150	5% 1/4W F	
R1141	1-249-417-11	CARBON	1K	5% 1/4W F	
R1150	1-249-421-11	CARBON	2.2K	5% 1/4W F	
R1151	1-249-422-11	CARBON	2.7K	5% 1/4W F	
R1152	1-249-424-11	CARBON	3.9K	5% 1/4W F	
R1153	1-249-426-11	CARBON	5.6K	5% 1/4W	
R1154	1-249-428-11	CARBON	8.2K	5% 1/4W F	
		< SWITCH >			
S1110	1-762-875-21	SWITCH, KEYBOARD (OPEN/CLOSE)			
S1111	1-762-875-21	SWITCH, KEYBOARD (DISC SKIP EX-CHANGE)			
S1112	1-762-875-21	SWITCH, KEYBOARD (DISC 3)			
S1113	1-762-875-21	SWITCH, KEYBOARD (DISC 2)			
S1114	1-762-875-21	SWITCH, KEYBOARD (DISC 1)			
S1115	1-762-875-21	SWITCH, KEYBOARD (I/⏻)			
**********					
	1-682-793-11	DIODE BOARD			
		**********			
		< DIODE >			
D731	8-719-082-30	DIODE SIR-34ST3FK			
**********					
	1-682-790-11	DRIVER BOARD			
		**********			
		< CAPACITOR >			
C702	1-126-964-51	ELECT	10uF	20% 50V	

Ref. No.	Part No.	Description			Remarks
		< CONNECTOR >			
CN701	1-785-336-11	PIN, CONNECTOR(LIGHT ANGLE)10P			
CN702	1-785-550-11	CONNECTOR, FFC/FPC 8P			
		< DIODE >			
D701	8-719-983-68	DIODE MTZJ-T-72-3.9A			
		< IC >			
IC701	8-759-598-69	IC BA6956AN			
		< RESISTOR >			
R701	1-249-411-11	CARBON	330	5% 1/4W	
R702	1-249-401-11	CARBON	47	5% 1/4W F	
**********					
	A-4475-600-A	DSP BOARD, COMPLETE (US,CND)			
	A-4475-638-A	DSP BOARD, COMPLETE (AEP,UK)			
	A-4475-962-A	DSP BOARD, COMPLETE (TH)			
	A-4475-982-A	DSP BOARD, COMPLETE (AUS,E,E91,EA,MX,SP,MY)			
		**********			
		< CAPACITOR >			
C601	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C602	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C603	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C604	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C605	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C606	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C607	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C608	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C609	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C610	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C611	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C612	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C613	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C614	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C615	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C616	1-126-934-11	ELECT	220uF	20% 10V	
C617	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C618	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C619	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C620	1-164-156-11	CERAMIC CHIP	0.1uF	25V	
C621	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	
C622	1-164-156-11	CERAMIC CHIP	0.1uF	25V	

DSP

Ref. No.	Part No.	Description			Remarks
C623	1-126-934-11	ELECT	220uF	20%	10V
C624	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C625	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C626	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C627	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C628	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C629	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C630	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C631	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C632	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C633	1-126-934-11	ELECT	220uF	20%	10V
C634	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C635	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C636	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C637	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C638	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C639	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C640	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C641	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C642	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C643	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C644	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C645	1-126-934-11	ELECT	220uF	20%	10V
C646	1-216-809-11	METAL CHIP	100	5%	1/16W
C647	1-126-934-11	ELECT	220uF	20%	10V
C648	1-126-934-11	ELECT	220uF	20%	10V
C649	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C650	1-126-934-11	ELECT	220uF	20%	10V
C651	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C652	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C653	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C654	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C655	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C656	1-126-934-11	ELECT	220uF	20%	10V
C657	1-216-809-11	METAL CHIP	100	5%	1/16W
C658	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C659	1-126-934-11	ELECT	220uF	20%	10V
C660	1-126-934-11	ELECT	220uF	20%	10V
C661	1-126-934-11	ELECT	220uF	20%	10V
C662	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C664	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C665	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C666	1-126-934-11	ELECT	220uF	20%	10V
C667	1-126-964-11	ELECT	10uF	20%	50V
C668	1-126-964-11	ELECT	10uF	20%	50V
C669	1-126-964-11	ELECT	10uF	20%	50V
C670	1-126-964-11	ELECT	10uF	20%	50V
C671	1-126-964-11	ELECT	10uF	20%	50V
C672	1-126-964-11	ELECT	10uF	20%	50V
C673	1-126-964-11	ELECT	10uF	20%	50V
C674	1-126-964-11	ELECT	10uF	20%	50V
C675	1-126-193-11	ELECT	1uF	20%	50V
C676	1-126-193-11	ELECT	1uF	20%	50V
C677	1-126-193-11	ELECT	1uF	20%	50V
C678	1-126-964-11	ELECT	10uF	20%	50V
C679	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C680	1-126-964-11	ELECT	10uF	20%	50V
C681	1-126-193-11	ELECT	1uF	20%	50V
C682	1-126-193-11	ELECT	1uF	20%	50V
C683	1-126-193-11	ELECT	1uF	20%	50V
C684	1-126-964-11	ELECT	10uF	20%	50V
C685	1-126-964-11	ELECT	10uF	20%	50V
C686	1-126-933-11	ELECT	100uF	20%	16V
C687	1-126-933-11	ELECT	100uF	20%	16V
C689	1-126-933-11	ELECT	100uF	20%	16V
C690	1-126-934-11	ELECT	220uF	20%	10V
C691	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C692	1-136-165-00	MYLAR	0.1uF	5%	50V
C693	1-136-165-00	MYLAR	0.1uF	5%	50V
C694	1-136-165-00	MYLAR	0.1uF	5%	50V
C695	1-136-165-00	MYLAR	0.1uF	5%	50V
C696	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C697	1-162-971-11	CERAMIC CHIP	0.001uF	10%	50V
C698	1-126-959-11	ELECT	0.47uF	20%	50V
C699	1-126-964-11	ELECT	10uF	20%	50V
C700	1-126-964-11	ELECT	10uF	20%	50V
C701	1-126-193-11	ELECT	1uF	20%	50V
C702	1-126-960-11	ELECT	1uF	20%	50V
C703	1-126-960-11	ELECT	1uF	20%	50V
C704	1-126-961-11	ELECT	2.2uF	20%	50V
C705	1-126-964-11	ELECT	10uF	20%	50V
C706	1-126-964-11	ELECT	10uF	20%	50V
C707	1-126-964-11	ELECT	10uF	20%	50V
C708	1-126-964-11	ELECT	10uF	20%	50V
C709	1-126-964-11	ELECT	10uF	20%	50V
C710	1-126-964-11	ELECT	10uF	20%	50V
C711	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C712	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C713	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C714	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C715	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C716	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C717	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C719	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C720	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C721	1-126-934-11	ELECT	220uF	20%	10V
C722	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C723	1-126-964-11	ELECT	10uF	20%	50V
C724	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C725	1-126-964-11	ELECT	10uF	20%	50V
C726	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C727	1-126-964-11	ELECT	10uF	20%	50V
C728	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C729	1-126-964-11	ELECT	10uF	20%	50V
C730	1-126-964-11	ELECT	10uF	20%	50V
C731	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C732	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C733	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C734	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C735	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C736	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C738	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C739	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C740	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C741	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C742	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C744	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
		< CONNECTOR >			
* CN601	1-568-941-11	PIN, CONNECTOR 3P			
CN602	1-779-289-11	CONNECTOR,FFC(LIF(NON-ZIF))21P			
CN603	1-779-291-11	CONNECTOR,FFC(LIF(NON-ZIF))23P			

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D601	8-719-158-02	DIODE RD3.9SB2	
D604	8-719-988-61	DIODE 1SS355TE-17	
D605	8-719-988-61	DIODE 1SS355TE-17	
D606	8-719-988-61	DIODE 1SS355TE-17	
D607	8-719-058-24	DIODE RB501V-40TE-17 (AUS,E,E91,EA,MX,SP,MY,TH)	
D608	8-719-058-24	DIODE RB501V-40TE-17 (AUS,E,E91,EA,MX,SP,MY,TH)	
D609	8-719-058-24	DIODE RB501V-40TE-17 (AUS,E,E91,EA,MX,SP,MY,TH)	
D610	8-719-058-24	DIODE RB501V-40TE-17 (AUS,E,E91,EA,MX,SP,MY,TH)	
		< ? >	
* EP601	1-537-738-21	TERMINAL, EARTH	
* EP602	1-537-738-21	TERMINAL, EARTH	
* EP603	1-537-738-21	TERMINAL, EARTH	
* EP604	1-537-738-21	TERMINAL, EARTH	
		< FERRITE BEAD >	
FB601	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB602	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB603	1-500-445-21	FERRITE 0UH	
FB604	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB605	1-216-864-11	METAL CHIP 0 5% 1/16W	
FB606	1-216-805-11	METAL CHIP 47 5% 1/16W	
FB607	1-500-445-21	FERRITE 0UH	
FB608	1-500-445-21	FERRITE 0UH	
FB609	1-500-445-21	FERRITE 0UH	
		< IC >	
IC601	8-759-698-76	IC CXD9617R	
IC602	8-759-827-81	IC IS61LV6416-15T(T&R)	
IC603	8-759-238-47	IC TC74HCT7007AF(EL)	
IC604	8-759-825-15	IC LC89056W-E	
IC605	8-759-657-47	IC AK4527	
IC606	8-759-825-13	IC PCM1748E/2K	
IC607	8-749-018-85	IC M61512FP	
IC608	8-759-549-25	IC SN74LVU04APWR	
IC609	8-749-923-04	IC TOTX178A (DIGITAL OUT OPTICAL)	
IC610	8-759-835-63	IC NJM2391DL1-26-TE1	
		< JACK >	
J601	1-770-890-11	JACK, PIN 6P (GAME/MD (VIDEO))	
J602	1-774-785-11	JACK, PIN 1P (SUB WOOFER OUT)	
		< JUMPER RESISTOR >	
JR601	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR603	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR620	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR621	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR622	1-216-864-11	METAL CHIP 0 5% 1/16W	
JR630	1-216-864-11	METAL CHIP 0 5% 1/16W	
		< TRANSISTOR >	
Q601	8-729-801-93	TRANSISTOR 2SD1387-3	
Q602	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q603	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q604	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q605	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q606	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q607	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q608	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q609	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q610	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q611	8-729-141-73	TRANSISTOR 2SC3624A-T1L15L16	
Q612	8-729-113-69	TRANSISTOR FN1F4M-M32	
Q613	8-729-113-13	TRANSISTOR FA1A4M-L33	
		< RESISTOR >	
R601	1-216-809-11	METAL CHIP 100 5% 1/16W	
R602	1-216-813-11	METAL CHIP 220 5% 1/16W	
R603	1-216-809-11	METAL CHIP 100 5% 1/16W	
R604	1-216-809-11	METAL CHIP 100 5% 1/16W	
R605	1-216-809-11	METAL CHIP 100 5% 1/16W	
R606	1-216-809-11	METAL CHIP 100 5% 1/16W	
R607	1-216-809-11	METAL CHIP 100 5% 1/16W	
R608	1-216-809-11	METAL CHIP 100 5% 1/16W	
R610	1-216-809-11	METAL CHIP 100 5% 1/16W	
R611	1-216-809-11	METAL CHIP 100 5% 1/16W	
R612	1-216-809-11	METAL CHIP 100 5% 1/16W	
R613	1-216-809-11	METAL CHIP 100 5% 1/16W	
R614	1-216-809-11	METAL CHIP 100 5% 1/16W	
R615	1-216-809-11	METAL CHIP 100 5% 1/16W	
R616	1-216-809-11	METAL CHIP 100 5% 1/16W	
R617	1-216-809-11	METAL CHIP 100 5% 1/16W	
R618	1-216-809-11	METAL CHIP 100 5% 1/16W	
R619	1-216-809-11	METAL CHIP 100 5% 1/16W	
R620	1-216-809-11	METAL CHIP 100 5% 1/16W	
R621	1-216-809-11	METAL CHIP 100 5% 1/16W	
R623	1-216-833-11	METAL CHIP 10K 5% 1/16W	
R628	1-216-809-11	METAL CHIP 100 5% 1/16W	
R629	1-216-809-11	METAL CHIP 100 5% 1/16W	
R630	1-216-809-11	METAL CHIP 100 5% 1/16W	
R631	1-216-809-11	METAL CHIP 100 5% 1/16W	
R632	1-216-809-11	METAL CHIP 100 5% 1/16W	
R633	1-216-809-11	METAL CHIP 100 5% 1/16W	
R634	1-216-809-11	METAL CHIP 100 5% 1/16W	
R635	1-216-809-11	METAL CHIP 100 5% 1/16W	
R636	1-216-809-11	METAL CHIP 100 5% 1/16W	
R637	1-216-809-11	METAL CHIP 100 5% 1/16W	
R638	1-216-809-11	METAL CHIP 100 5% 1/16W	
R639	1-216-809-11	METAL CHIP 100 5% 1/16W	
R640	1-216-809-11	METAL CHIP 100 5% 1/16W	
R641	1-216-809-11	METAL CHIP 100 5% 1/16W	
R642	1-216-809-11	METAL CHIP 100 5% 1/16W	
R643	1-216-815-11	METAL CHIP 330 5% 1/16W	
R644	1-216-815-11	METAL CHIP 330 5% 1/16W	
R645	1-216-815-11	METAL CHIP 330 5% 1/16W	
R646	1-216-815-11	METAL CHIP 330 5% 1/16W	
R647	1-216-815-11	METAL CHIP 330 5% 1/16W	
R648	1-216-815-11	METAL CHIP 330 5% 1/16W	
R649	1-216-817-11	METAL CHIP 470 5% 1/16W	
R650	1-216-817-11	METAL CHIP 470 5% 1/16W	
R651	1-216-817-11	METAL CHIP 470 5% 1/16W	
R652	1-216-817-11	METAL CHIP 470 5% 1/16W	
R657	1-216-809-11	METAL CHIP 100 5% 1/16W	
R658	1-216-809-11	METAL CHIP 100 5% 1/16W	
R659	1-216-809-11	METAL CHIP 100 5% 1/16W	
R660	1-216-815-11	METAL CHIP 330 5% 1/16W	
R661	1-216-815-11	METAL CHIP 330 5% 1/16W	

DSP | FRONT AMP

Ref. No.	Part No.	Description			Remarks
R662	1-216-809-11	METAL CHIP	100	5%	1/16W
R663	1-216-817-11	METAL CHIP	470	5%	1/16W
R664	1-216-809-11	METAL CHIP	100	5%	1/16W
R665	1-216-809-11	METAL CHIP	100	5%	1/16W
R666	1-216-809-11	METAL CHIP	100	5%	1/16W
R667	1-216-809-11	METAL CHIP	100	5%	1/16W
R668	1-216-809-11	METAL CHIP	100	5%	1/16W
R669	1-216-809-11	METAL CHIP	100	5%	1/16W
R670	1-216-809-11	METAL CHIP	100	5%	1/16W
R671	1-216-809-11	METAL CHIP	100	5%	1/16W
R672	1-216-809-11	METAL CHIP	100	5%	1/16W
R673	1-216-809-11	METAL CHIP	100	5%	1/16W
R674	1-216-809-11	METAL CHIP	100	5%	1/16W
R675	1-216-809-11	METAL CHIP	100	5%	1/16W
R676	1-216-809-11	METAL CHIP	100	5%	1/16W
R677	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R678	1-216-833-11	METAL CHIP	10K	5%	1/16W
R679	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R680	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R681	1-216-839-11	METAL CHIP	33K	5%	1/16W
R682	1-216-809-11	METAL CHIP	100	5%	1/16W
R683	1-216-809-11	METAL CHIP	100	5%	1/16W
R684	1-216-809-11	METAL CHIP	100	5%	1/16W
R685	1-216-809-11	METAL CHIP	100	5%	1/16W
R686	1-216-809-11	METAL CHIP	100	5%	1/16W
R687	1-216-809-11	METAL CHIP	100	5%	1/16W
R688	1-216-809-11	METAL CHIP	100	5%	1/16W
R689	1-216-821-11	METAL CHIP	1K	5%	1/16W
R690	1-216-857-11	METAL CHIP	1M	5%	1/16W
R691	1-216-815-11	METAL CHIP	330	5%	1/16W
R692	1-216-809-11	METAL CHIP	100	5%	1/16W
R693	1-216-809-11	METAL CHIP	100	5%	1/16W
R694	1-216-809-11	METAL CHIP	100	5%	1/16W
R695	1-216-821-11	METAL CHIP	1K	5%	1/16W
R696	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R697	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R698	1-216-852-11	METAL CHIP	390K	5%	1/16W
R699	1-216-852-11	METAL CHIP	390K	5%	1/16W
R700	1-216-833-11	METAL CHIP	10K	5%	1/16W
R701	1-216-833-11	METAL CHIP	10K	5%	1/16W
R702	1-216-857-11	METAL CHIP	1M	5%	1/16W
R703	1-216-857-11	METAL CHIP	1M	5%	1/16W
R704	1-216-845-11	METAL CHIP	100K	5%	1/16W
R705	1-216-845-11	METAL CHIP	100K	5%	1/16W
R706	1-216-841-11	METAL CHIP	47K	5%	1/16W
R707	1-216-841-11	METAL CHIP	47K	5%	1/16W
R708	1-216-857-11	METAL CHIP	1M	5%	1/16W
R709	1-216-841-11	METAL CHIP	47K	5%	1/16W
R711	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R712	1-216-845-11	METAL CHIP	100K	5%	1/16W
R713	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R715	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R716	1-216-845-11	METAL CHIP	100K	5%	1/16W
R717	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R719	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R720	1-216-845-11	METAL CHIP	100K	5%	1/16W
R721	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R723	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R724	1-216-845-11	METAL CHIP	100K	5%	1/16W
R725	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R727	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R728	1-216-845-11	METAL CHIP	100K	5%	1/16W
R729	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R730	1-216-837-11	METAL CHIP	22K	5%	1/16W
R731	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R733	1-216-821-11	METAL CHIP	1K	5%	1/16W
R734	1-216-821-11	METAL CHIP	1K	5%	1/16W
R736	1-216-821-11	METAL CHIP	1K	5%	1/16W
R737	1-216-821-11	METAL CHIP	1K	5%	1/16W
R740	1-216-835-11	METAL CHIP	15K	5%	1/16W
R741	1-216-835-11	METAL CHIP	15K	5%	1/16W
R744	1-216-833-11	METAL CHIP	10K	5%	1/16W
R745	1-216-833-11	METAL CHIP	10K	5%	1/16W
R747	1-216-845-11	METAL CHIP	100K	5%	1/16W
R748	1-216-845-11	METAL CHIP	100K	5%	1/16W
R749	1-216-834-11	METAL CHIP	12K	5%	1/16W
R750	1-216-834-11	METAL CHIP	12K	5%	1/16W
R751	1-216-841-11	METAL CHIP	47K	5%	1/16W
R752	1-216-841-11	METAL CHIP	47K	5%	1/16W
R753	1-216-809-11	METAL CHIP	100	5%	1/16W
R754	1-216-809-11	METAL CHIP	100	5%	1/16W
R756	1-216-841-11	METAL CHIP	47K	5%	1/16W
R757	1-216-841-11	METAL CHIP	47K	5%	1/16W
R758	1-216-821-11	METAL CHIP	1K	5%	1/16W
R759	1-216-821-11	METAL CHIP	1K	5%	1/16W
R760	1-216-821-11	METAL CHIP	1K	5%	1/16W
R761	1-216-821-11	METAL CHIP	1K	5%	1/16W
R762	1-216-821-11	METAL CHIP	1K	5%	1/16W
R763	1-216-821-11	METAL CHIP	1K	5%	1/16W
R765	1-216-821-11	METAL CHIP	1K	5%	1/16W
R766	1-216-821-11	METAL CHIP	1K	5%	1/16W
R767	1-216-821-11	METAL CHIP	1K	5%	1/16W
R768	1-216-833-11	METAL CHIP	10K	5%	1/16W
R769	1-216-821-11	METAL CHIP	1K	5%	1/16W
R770	1-216-821-11	METAL CHIP	1K	5%	1/16W
R771	1-216-833-11	METAL CHIP	10K	5%	1/16W
R772	1-216-821-11	METAL CHIP	1K	5%	1/16W
R773	1-216-821-11	METAL CHIP	1K	5%	1/16W
R774	1-216-821-11	METAL CHIP	1K	5%	1/16W
R775	1-216-833-11	METAL CHIP	10K	5%	1/16W
R776	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R777	1-216-833-11	METAL CHIP	10K	5%	1/16W
R778	1-216-821-11	METAL CHIP	1K	5%	1/16W
					(AUS,E,E91,EA,MX,SP,MY,TH)
R779	1-216-841-11	METAL CHIP	47K	5%	1/16W
R780	1-216-841-11	METAL CHIP	47K	5%	1/16W
R781	1-216-841-11	METAL CHIP	47K	5%	1/16W
		< VIBRATOR >			
X601	1-579-993-21	VIBRATOR, CERAMIC (13.5MHz)			

****

	A-4727-111-A	FRONT AMP BOARD, COMPLETE		(US,CND)
	A-4727-135-A	FRONT AMP BOARD, COMPLETE		(AEP,UK)
	A-4727-161-A	FRONT AMP BOARD, COMPLETE		(AUS,E91,EA,SP,MY)
	A-4727-199-A	FRONT AMP BOARD, COMPLETE		(E,MX)
	A-4727-221-A	FRONT AMP BOARD, COMPLETE		(TH)
		**********		
	7-685-646-79	SCREW +BVTP	3X8	TYPE2 N-S

FRONT AMP

Ref. No.	Part No.	Description			Remarks
		< CAPACITOR >			
C801	1-128-582-11	ELECT	10uF	20%	100V (US,CND)
C801	1-126-964-11	ELECT	10uF	20%	50V (EXCEPT US,CND)
C802	1-162-292-31	CERAMIC	680PF	10%	50V
C803	1-162-286-31	CERAMIC	220PF	10%	50V (AEP,UK)
C803	1-162-282-31	CERAMIC	100PF	10%	50V (EXCEPT AEP,UK)
C804	1-126-967-11	ELECT	47uF	20%	50V (US,CND)
C804	1-126-933-11	ELECT	100uF	20%	16V (EXCEPT US,CND)
C805	1-102-936-00	CERAMIC	3.0PF	0.25PF	50V
C806	1-136-495-11	FILM	0.068uF	5%	50V
C807	1-136-495-11	FILM	0.068uF	5%	50V
C808	1-128-560-11	ELECT	22uF	20%	100V
C812	1-136-165-00	FILM	0.1uF	5%	50V
C816	1-162-306-11	CERAMIC	0.01uF	30%	16V
C821	1-128-562-11	ELECT	47uF	20%	100V
C822	1-126-968-11	ELECT	100uF	20%	50V
C831	1-126-964-11	ELECT	10uF	20%	50V
C832	1-126-382-11	ELECT	100uF	20%	10V
C833	1-126-961-11	ELECT	2.2uF	20%	50V
C834	1-104-665-11	ELECT	100uF	20%	10V
C851	1-128-582-11	ELECT	10uF	20%	100V (US,CND)
C851	1-126-964-11	ELECT	10uF	20%	50V (EXCEPT US,CND)
C852	1-162-292-31	CERAMIC	680PF	10%	50V
C853	1-162-286-31	CERAMIC	220PF	10%	50V (AEP,UK)
C853	1-162-282-31	CERAMIC	100PF	10%	50V (EXCEPT AEP,UK)
C854	1-126-967-11	ELECT	47uF	20%	50V (US,CND)
C854	1-126-933-11	ELECT	100uF	20%	16V (EXCEPT US,CND)
C855	1-102-936-00	CERAMIC	3.0PF	0.25PF	50V
C856	1-136-495-11	FILM	0.068uF	5%	50V
C857	1-136-495-11	FILM	0.068uF	5%	50V
C858	1-128-560-11	ELECT	22uF	20%	100V
C862	1-136-165-00	FILM	0.1uF	5%	50V
C871	1-137-749-11	MYLAR	0.1uF		100V
C872	1-137-749-11	MYLAR	0.1uF		100V
C873	1-137-841-11	ELECT	2200uF	20%	71V (E,MX)
C873	1-135-928-11	ELECT	2200uF	20%	63V (US,CND,AEP,UK)
C873	1-137-847-11	ELECT	2200uF	20%	71V (AUS,E91,EA,SP,MY,TH)
C874	1-137-841-11	ELECT	2200uF	20%	71V (E,MX)
C874	1-135-928-11	ELECT	2200uF	20%	63V (US,CND,AEP,UK)
C874	1-137-847-11	ELECT	2200uF	20%	71V (AUS,E91,EA,SP,MY,TH)
C881	1-136-165-00	FILM	0.1uF	5%	50V
C882	1-136-165-00	FILM	0.1uF	5%	50V
C883	1-136-165-00	FILM	0.1uF	5%	50V
C884	1-136-165-00	FILM	0.1uF	5%	50V
C885	1-162-306-11	CERAMIC	0.01uF	30%	16V
C886	1-162-306-11	CERAMIC	0.01uF	30%	16V
C920	1-126-956-91	ELECT	0.1uF	20%	50V
C921	1-128-582-11	ELECT	10uF	20%	100V (US,CND)
C921	1-126-964-11	ELECT	10uF	20%	50V (EXCEPT US,CND)
C922	1-126-767-11	ELECT	1000uF	20%	16V
C923	1-126-964-11	ELECT	10uF	20%	50V
C924	1-126-926-11	ELECT	1000uF	20%	10V
C925	1-126-964-11	ELECT	10uF	20%	50V
C926	1-126-933-11	ELECT	100uF	20%	16V
		< CONNECTOR >			
CN801	1-573-829-11	CONNECTOR, BOARD TO BOARD 15P			
CN802	1-784-031-21	CONNECTOR, BOARD TO BOARD 8P			
CN803	1-691-769-11	PLUG (MICRO CONNECTOR) 7P			
CN804	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
		< DIODE >			
D801	8-719-911-19	DIODE 1SS119-25			
D802	8-719-947-65	DIODE MTZJ-T-72-16B			
D821	8-719-911-19	DIODE 1SS119-25			
D830	8-719-911-19	DIODE 1SS119-25			
D831	8-719-911-19	DIODE 1SS119-25			
D851	8-719-911-19	DIODE 1SS119-25			
D852	8-719-947-65	DIODE MTZJ-T-72-16B			
D871	8-719-510-68	DIODE D5SBA204101			
D881	8-719-911-19	DIODE 1SS119-25			
D891	8-719-911-19	DIODE 1SS119-25			
D921	8-719-050-84	DIODE RB441Q-40T-77			
D922	8-719-947-81	DIODE MTZJ-T-72-24A			
		< IC >			
IC801	8-749-017-00	IC STK412-090 (AEP,UK)			
IC801	8-749-017-01	IC STK412-020 (EXCEPT AEP,UK)			
IC921	6-701-381-01	IC UPC24A12AHF			
IC922	8-759-701-59	IC NJM7809FA			
IC923	8-759-088-08	IC UPC7812AHF			
		< COIL >			
L881	1-420-872-00	COIL, AIR-CORE			
L882	1-420-872-00	COIL, AIR-CORE			
		< TRANSISTOR >			
Q801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q821	8-729-140-82	TRANSISTOR 2SA988-PAFAEA			
Q822	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q823	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q831	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q832	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q833	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q834	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q835	8-729-140-82	TRANSISTOR 2SA988-PAFAEA			
Q836	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q837	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q881	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q882	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q921	8-729-209-60	TRANSISTOR 2SB1375			
Q922	8-729-900-80	TRANSISTOR DTC114ES			
Q923	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q924	8-729-900-80	TRANSISTOR DTC114ES			

FRONT AMP | HEAD (A) | HEAD (B) | LEAF SW

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R801	1-249-417-11	CARBON	1K	5%	1/4W F
R802	1-249-438-11	CARBON	56K	5%	1/4W
R803	1-249-413-11	CARBON	470	5%	1/4W F (AEP,UK)
R803	1-249-411-11	CARBON	330	5%	1/4W (US,CND)
R803	1-249-408-11	CARBON	180	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R804	1-249-438-11	CARBON	56K	5%	1/4W
⚠R805	1-220-755-11	METAL	0.22	10%	2W
⚠R806	1-220-755-11	METAL	0.22	10%	2W
R807	1-249-417-11	CARBON	1K	5%	1/4W F
R808	1-249-431-11	CARBON	15K	5%	1/4W
R809	1-249-441-11	CARBON	100K	5%	1/4W
R810	1-260-076-11	CARBON	10	5%	1/2W
⚠R811	1-212-881-11	FUSIBLE	100	5%	1/4W
R812	1-260-330-11	CARBON	1.5K	5%	1/2W
R819	1-249-429-11	CARBON	10K	5%	1/4W
⚠R820	1-202-972-61	FUSIBLE	1	5%	1/4W
R821	1-249-421-11	CARBON	2.2K	5%	1/4W F
R822	1-249-433-11	CARBON	22K	5%	1/4W
R823	1-249-429-11	CARBON	10K	5%	1/4W
R824	1-249-421-11	CARBON	2.2K	5%	1/4W F
R825	1-249-439-11	CARBON	68K	5%	1/4W
R826	1-249-426-11	CARBON	5.6K	5%	1/4W
R827	1-249-431-11	CARBON	15K	5%	1/4W
R828	1-249-435-11	CARBON	33K	5%	1/4W
R830	1-249-425-11	CARBON	4.7K	5%	1/4W F
R831	1-249-425-11	CARBON	4.7K	5%	1/4W F
R833	1-249-425-11	CARBON	4.7K	5%	1/4W F
R834	1-249-433-11	CARBON	22K	5%	1/4W
R835	1-249-435-11	CARBON	33K	5%	1/4W
R836	1-249-429-11	CARBON	10K	5%	1/4W
R837	1-249-429-11	CARBON	10K	5%	1/4W
R839	1-249-437-11	CARBON	47K	5%	1/4W
R840	1-249-438-11	CARBON	56K	5%	1/4W
R851	1-249-417-11	CARBON	1K	5%	1/4W F
R852	1-249-438-11	CARBON	56K	5%	1/4W
R853	1-249-413-11	CARBON	470	5%	1/4W F (AEP,UK)
R853	1-249-411-11	CARBON	330	5%	1/4W (US,CND)
R853	1-249-408-11	CARBON	180	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R854	1-249-438-11	CARBON	56K	5%	1/4W
⚠R855	1-220-755-11	METAL	0.22	10%	2W
⚠R856	1-220-755-11	METAL	0.22	10%	2W
R857	1-249-417-11	CARBON	1K	5%	1/4W F
R858	1-249-431-11	CARBON	15K	5%	1/4W
R859	1-249-441-11	CARBON	100K	5%	1/4W
R860	1-260-076-11	CARBON	10	5%	1/2W
⚠R861	1-212-881-11	FUSIBLE	100	5%	1/4W
R862	1-260-330-11	CARBON	1.5K	5%	1/2W
R871	1-249-441-11	CARBON	100K	5%	1/4W
R872	1-249-441-11	CARBON	100K	5%	1/4W
⚠R880	1-215-888-00	METAL OXIDE	220	5%	2W (US,CND,AEP,UK)
⚠R880	1-215-889-00	METAL OXIDE	330	5%	2W (AUS,E,E91,EA,MX,SP,MY,TH)
R881	1-260-076-11	CARBON	10	5%	1/2W
R882	1-260-076-11	CARBON	10	5%	1/2W
R883	1-260-076-11	CARBON	10	5%	1/2W
R884	1-260-076-11	CARBON	10	5%	1/2W
R885	1-249-437-11	CARBON	47K	5%	1/4W
R886	1-249-437-11	CARBON	47K	5%	1/4W
R887	1-249-429-11	CARBON	10K	5%	1/4W
R888	1-249-437-11	CARBON	47K	5%	1/4W
R889	1-249-429-11	CARBON	10K	5%	1/4W
R890	1-249-441-11	CARBON	100K	5%	1/4W
R921	1-249-429-11	CARBON	10K	5%	1/4W
R924	1-249-429-11	CARBON	10K	5%	1/4W
R925	1-249-427-11	CARBON	6.8K	5%	1/4W F
		< RELAY >			
RY881	1-515-920-11	RELAY			
		< TERMINAL >			
TM801	1-694-677-12	TERMINAL BOARD (4P) (FRONT SPEAKER)			
**********					
	A-2007-839-A	HEAD (A) BOARD, COMPLETE			
		**********			
		< CONNECTOR >			
* CN1	1-564-719-11	PIN, CONNECTOR (SMALL TYPE) 3P			
**********					
	A-2007-840-A	HEAD (B) BOARD, COMPLETE			
		**********			
CN2	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P			
**********					
	A-2007-838-A	LEAF SW BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1001	1-107-716-11	ELECT	33uF	20%	10V
		< CONNECTOR >			
CN1001	1-784-459-11	CONNECTOR, FFC/FPC 17P			
		< DIODE >			
D1001	8-719-911-19	DIODE 1SS119-25			
D1002	8-719-911-19	DIODE 1SS119-25			
		< IC >			
IC1001	8-749-016-76	IC RPI-321			
IC1002	8-749-016-76	IC RPI-321			
		< TRANSISTOR >			
Q1001	8-729-029-56	TRANSISTOR DTA144ESA			
		< RESISTOR >			
R907	1-247-879-11	CARBON	100K	5%	1/4W
R1001	1-249-409-11	CARBON	220	5%	1/4W F
R1002	1-249-409-11	CARBON	220	5%	1/4W F
R1003	1-249-414-11	CARBON	560	5%	1/4W F
R1004	1-247-834-11	CARBON	1.3K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
R1005	1-247-818-11	CARBON	300	5%	1/4W
R1006	1-247-864-11	CARBON	24K	5%	1/4W
R1007	1-247-780-00	CARBON	7.5	5%	1/4W
R1008	1-249-417-11	CARBON	1K	5%	1/4W F
		< VARIABLE RESISTOR >			
RV1001	1-241-785-11	RES, ADJ, CARBON 10K (HIGH SPEED)			
RV1002	1-241-785-11	RES, ADJ, CARBON 10K (NORM SPEED)			
		< SWITCH >			
S1001	1-570-953-11	SWITCH, PUSH (1 KEY) (DECK A PLAY)			
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DECK B PLAY)			
S1003	1-771-333-11	SWITCH, LEAF (DECK A HALF)			
S1004	1-771-536-12	SWITCH, LEAF (DECK A 120/70)			
S1005	1-771-536-12	SWITCH, LEAF (DECK A REC)			
S1006	1-771-333-11	SWITCH, LEAF (DECK B HALF)			
S1008	1-771-536-12	SWITCH, LEAF (DECK B 120/			
S1009	1-771-536-12	SWITCH, LEAF (DECK B REC)			
**********					
	A-4727-119-A	MAIN BOARD, COMPLETE (US,CND)			
	A-4727-143-A	MAIN BOARD, COMPLETE (AEP,UK)			
	A-4727-163-A	MAIN BOARD, COMPLETE (AUS,E91,SP,MY)			
	A-4727-201-A	MAIN BOARD, COMPLETE (E,MX)			
	A-4727-150-A	MAIN BOARD, COMPLETE (EA)			
	A-4727-227-A	MAIN BOARD, COMPLETE (TH)			
		**********			
		< CAPACITOR >			
C1	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C2	1-162-974-11	CERAMIC CHIP	0.01uF		50V (AEP,UK)
C3	1-126-947-11	ELECT	47uF	20%	16V
C4	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C5	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C7	1-162-974-11	CERAMIC CHIP	0.01uF		50V (EXCEPT AEP,UK)
C11	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C12	1-126-947-11	ELECT	47uF	20%	16V
C13	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C14	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C15	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C16	1-126-947-11	ELECT	47uF	20%	16V
C17	1-126-959-11	ELECT	0.47uF	20%	50V
C18	1-126-960-11	ELECT	1uF	20%	50V
C19	1-126-960-11	ELECT	1uF	20%	50V
C20	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (US,CND,AEP,UK)
C20	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V (AUS,E,E91,EA,MX,SP,MY,TH)
C21	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V (US,CND,AEP,UK)
C21	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V (AUS,E,E91,EA,MX,SP,MY,TH)
C22	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C23	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C24	1-126-963-11	ELECT	4.7uF	20%	50V
C25	1-126-964-11	ELECT	10uF	20%	50V
C26	1-162-959-11	CERAMIC CHIP	330PF	5%	50V (AEP,UK)
C26	1-164-471-11	CERAMIC CHIP	680PF	5%	50V (EXCEPT AEP,UK)
C27	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C28	1-126-963-11	ELECT	4.7uF	20%	50V
C29	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C30	1-126-962-11	ELECT	3.3uF	20%	50V
C31	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C32	1-126-963-11	ELECT	4.7uF	20%	50V
C34	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C35	1-126-947-11	ELECT	47uF	20%	16V
C36	1-126-963-11	ELECT	4.7uF	20%	50V
C38	1-162-967-11	CERAMIC CHIP	0.0033uF	10%	50V
C39	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C40	1-164-361-11	CERAMIC CHIP	0.047uF		16V
C41	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C42	1-162-940-11	CERAMIC CHIP	9PF	0.5PF	50V
C43	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C46	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C48	1-162-947-11	CERAMIC CHIP	33PF	5%	50V (AEP,UK)
C49	1-162-947-11	CERAMIC CHIP	33PF	5%	50V (AEP,UK)
C51	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C52	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C53	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C56	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C57	1-126-947-11	ELECT	47uF	20%	16V
C58	1-126-961-11	ELECT	2.2uF	20%	50V
C59	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C60	1-126-947-11	ELECT	47uF	20%	16V
C61	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C62	1-126-959-11	ELECT	0.47uF	20%	50V
C63	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C69	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C81	1-164-363-11	CERAMIC CHIP	560PF	5%	50V (AEP,UK)
C82	1-162-959-11	CERAMIC CHIP	330PF	5%	50V (AEP,UK)
C83	1-126-964-11	ELECT	10uF	20%	50V (AEP,UK)
C84	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (AEP,UK)
C85	1-126-961-11	ELECT	2.2uF	20%	50V (AEP,UK)
C86	1-162-974-11	CERAMIC CHIP	0.01uF		50V (AEP,UK)
C87	1-164-363-11	CERAMIC CHIP	560PF	5%	50V (AEP,UK)
C88	1-126-961-11	ELECT	2.2uF	20%	50V (AEP,UK)
C89	1-162-974-11	CERAMIC CHIP	0.01uF		50V (AEP,UK)
C90	1-162-924-11	CERAMIC CHIP	56PF	5%	50V (AEP,UK)
C91	1-162-924-11	CERAMIC CHIP	56PF	5%	50V (AEP,UK)
C92	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V (AEP,UK)
C105	1-126-964-11	ELECT	10uF	20%	50V
C111	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C112	1-126-963-11	ELECT	4.7uF	20%	50V
C113	1-126-965-91	ELECT	22uF	20%	50V
C114	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C121	1-107-721-11	ELECT	4.7uF	20%	100V
C141	1-126-964-11	ELECT	10uF	20%	50V
C143	1-126-964-11	ELECT	10uF	20%	50V
C155	1-126-964-11	ELECT	10uF	20%	50V

MAIN

Ref. No.	Part No.	Description			Remarks
C171	1-107-721-11	ELECT	4.7uF	20%	100V
C271	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C272	1-126-916-11	ELECT	1000uF	20%	6.3V
C273	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C274	1-126-916-11	ELECT	1000uF	20%	6.3V
C275	1-126-935-11	ELECT	470uF	20%	10V
C276	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C277	1-126-767-11	ELECT	1000uF	20%	16V
C301	1-126-960-11	ELECT	1uF	20%	50V
C302	1-130-479-00	MYLAR	0.0047uF	5%	50V
C303	1-136-165-00	FILM	0.1uF	5%	50V
C304	1-136-165-00	FILM	0.1uF	5%	50V
C305	1-126-964-11	ELECT	10uF	20%	50V
C306	1-126-960-11	ELECT	1uF	20%	50V
C307	1-126-960-11	ELECT	1uF	20%	50V
C308	1-126-964-11	ELECT	10uF	20%	50V
C309	1-137-194-81	FILM	0.47uF	5%	50V
C310	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C311	1-126-964-11	ELECT	10uF	20%	50V
C312	1-126-959-11	ELECT	0.47uF	20%	50V
C313	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C314	1-126-964-11	ELECT	10uF	20%	50V
C315	1-126-963-11	ELECT	4.7uF	20%	50V
C316	1-126-933-11	ELECT	100uF	20%	16V
C317	1-104-665-11	ELECT	100uF	20%	10V
C318	1-126-964-11	ELECT	10uF	20%	50V
C319	1-126-961-11	ELECT	2.2uF	20%	50V
C320	1-126-961-11	ELECT	2.2uF	20%	50V
C321	1-164-392-11	CERAMIC CHIP	390PF	10%	50V
C322	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C323	1-130-487-00	MYLAR	0.022uF	5%	50V
C324	1-126-964-11	ELECT	10uF	20%	50V
C325	1-126-965-91	ELECT	22uF	20%	50V
C326	1-164-392-11	CERAMIC CHIP	390PF	10%	50V
C327	1-104-665-11	ELECT	100uF	20%	10V
C328	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C329	1-130-483-00	MYLAR	0.01uF	5%	50V
C330	1-126-964-11	ELECT	10uF	20%	50V
C331	1-126-965-91	ELECT	22uF	20%	50V
C332	1-137-427-11	MYLAR	120PF	5%	50V
C333	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C334	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C335	1-137-150-11	MYLAR	0.01uF	5%	100V
C336	1-126-961-11	ELECT	2.2uF	20%	50V
C337	1-130-485-00	MYLAR	0.015uF	5%	50V
C338	1-130-481-00	MYLAR	0.0068uF	5%	50V
C339	1-130-481-00	MYLAR	0.0068uF	5%	50V
C340	1-130-486-00	MYLAR	0.018uF	10%	50V
C341	1-126-960-11	ELECT	1uF	20%	50V
C342	1-126-947-11	ELECT	47uF	20%	16V
C343	1-126-964-11	ELECT	10uF	20%	50V
C351	1-126-960-11	ELECT	1uF	20%	50V
C352	1-130-479-00	MYLAR	0.0047uF	5%	50V
C353	1-136-165-00	FILM	0.1uF	5%	50V
C354	1-136-165-00	FILM	0.1uF	5%	50V
C355	1-126-964-11	ELECT	10uF	20%	50V
C356	1-126-960-11	ELECT	1uF	20%	50V
C357	1-126-960-11	ELECT	1uF	20%	50V
C358	1-126-964-11	ELECT	10uF	20%	50V
C359	1-137-194-81	FILM	0.47uF	5%	50V
C360	1-162-962-11	CERAMIC CHIP	470PF	10%	50V

Ref. No.	Part No.	Description			Remarks
C362	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C363	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C368	1-126-964-11	ELECT	10uF	20%	50V
C369	1-126-961-11	ELECT	2.2uF	20%	50V
C370	1-126-961-11	ELECT	2.2uF	20%	50V
C371	1-164-392-11	CERAMIC CHIP	390PF	10%	50V
C372	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C373	1-130-487-00	MYLAR	0.022uF	5%	50V
C374	1-126-964-11	ELECT	10uF	20%	50V
C375	1-126-965-91	ELECT	22uF	20%	50V
C376	1-164-392-11	CERAMIC CHIP	390PF	10%	50V
C377	1-104-665-11	ELECT	100uF	20%	10V
C378	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C379	1-130-483-00	MYLAR	0.01uF	5%	50V
C380	1-126-964-11	ELECT	10uF	20%	50V
C381	1-126-965-91	ELECT	22uF	20%	50V
C382	1-137-427-11	MYLAR	120PF	5%	50V
C383	1-162-961-11	CERAMIC CHIP	330PF	10%	50V
C384	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C393	1-126-964-11	ELECT	10uF	20%	50V
C410	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C411	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C412	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C414	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C416	1-126-916-11	ELECT	1000uF	20%	6.3V
C445	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C462	1-104-665-11	ELECT	100uF	20%	10V
C464	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C497	1-126-964-11	ELECT	10uF	20%	50V
C498	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C499	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C501	1-126-964-11	ELECT	10uF	20%	50V
C502	1-136-165-00	FILM	0.1uF	5%	50V
C503	1-136-165-00	FILM	0.1uF	5%	50V
C504	1-109-953-11	ELECT	2.2uF	20%	50V
C505	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C506	1-107-717-11	ELECT	47uF	20%	50V
C511	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C951	1-126-955-11	ELECT	4700uF	20%	35V
C952	1-130-483-00	MYLAR	0.01uF	5%	50V
C953	1-130-483-00	MYLAR	0.01uF	5%	50V
C954	1-117-208-11	ELECT	22000uF	20%	25V
C955	1-130-483-00	MYLAR	0.01uF	5%	50V
C956	1-130-483-00	MYLAR	0.01uF	5%	50V
C961	1-126-961-11	ELECT	2.2uF	20%	50V
C971	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C972	1-126-935-11	ELECT	470uF	20%	16V
C973	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C974	1-126-916-11	ELECT	1000uF	20%	6.3V
C975	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C976	1-126-916-11	ELECT	1000uF	20%	6.3V
C977	1-162-974-11	CERAMIC CHIP	0.01uF		50V
		< FILTER >			
CF1	1-795-426-11	FILTER, CERAMIC (AEP,UK)			
CF1	1-760-233-71	FILTER, CERAMIC (EXCEPT AEP,UK)			
CF2	1-795-426-11	FILTER, CERAMIC (AEP,UK)			
CF2	1-760-233-71	FILTER, CERAMIC (EXCEPT AEP,UK)			
		< CONNECTOR >			
* CN101	1-774-876-21	CONNECTOR, BOARD TO BOARD 8P			

Ref. No.	Part No.	Description	Remarks
CN102	1-573-847-11	CONNECTOR, BOARD TO BOARD 15P	
CN103	1-573-847-11	CONNECTOR, BOARD TO BOARD 15P	
* CN104	1-564-518-11	PLUG, CONNECTOR 3P	
CN203	1-779-549-21	CONNECTOR,FFC(LIF(NON-ZIF))12P	
CN204	1-785-320-11	PIN, CONNECTOR (STRAIGHT) 8P	
CN304	1-784-778-11	CONNECTOR, FFC 17P	
CN401	1-793-766-11	CONNECTOR, BOARD TO BOARD 30P	
CN402	1-506-469-11	PIN, CONNECTOR 4P	
CN501	1-779-289-11	CONNECTOR,FFC(LIF(NON-ZIF))21P	
CN502	1-779-291-11	CONNECTOR,FFC(LIF(NON-ZIF))23P	
		< DIODE >	
D51	8-719-988-61	DIODE 1SS355TE-17	
D81	8-719-988-61	DIODE 1SS355TE-17 (AEP,UK)	
D111	8-719-988-61	DIODE 1SS355TE-17	
D112	8-719-056-82	DIODE UDZ-TE-17-6.2B	
D113	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D501	8-719-988-61	DIODE 1SS355TE-17	
D502	8-719-988-61	DIODE 1SS355TE-17	
D503	8-719-988-61	DIODE 1SS355TE-17	
D504	8-719-988-61	DIODE 1SS355TE-17	
D505	8-719-988-61	DIODE 1SS355TE-17	
D506	8-719-988-61	DIODE 1SS355TE-17	
D507	8-719-988-61	DIODE 1SS355TE-17	
D508	8-719-988-61	DIODE 1SS355TE-17	
D509	8-719-988-61	DIODE 1SS355TE-17	
D510	8-719-988-61	DIODE 1SS355TE-17	
D511	8-719-988-61	DIODE 1SS355TE-17	
D950	8-719-028-23	DIODE D3SBA20-4101	
D959	8-719-028-23	DIODE D3SBA20-4101	
D961	8-719-988-61	DIODE 1SS355TE-17	
D962	8-719-988-61	DIODE 1SS355TE-17	
D971	8-719-200-82	DIODE 11ES2	
D972	8-719-200-82	DIODE 11ES2	
D973	8-719-200-82	DIODE 11ES2	
D974	8-719-200-82	DIODE 11ES2	
D975	8-719-200-82	DIODE 11ES2	
D981	8-719-200-82	DIODE 11ES2	
D982	8-719-200-82	DIODE 11ES2	
D983	8-719-200-82	DIODE 11ES2	
D984	8-719-200-82	DIODE 11ES2	
		< FRONT END >	
FE2	1-693-478-11	FRONT END (FM3 GANGS) (EXCEPT AEP,UK)	
FE3	1-693-496-11	FRONT END (4 GANG) (AEP,UK)	
		< IC >	
IC11	8-759-828-33	IC LA1845	
IC51	8-759-590-13	IC LC72131D	
IC81	8-759-541-48	IC BU1924 (AEP,UK)	
IC301	8-759-652-02	IC HA12226F	
IC302	8-759-143-54	IC uPC1330HA	
IC303	8-759-656-83	IC NJM4580MD-(TE2)	
IC304	8-759-656-83	IC NJM4580MD-(TE2)	
IC401	6-800-712-01	IC M30622MGA-A72FP	
IC501	8-759-635-63	IC M51943BSL-TP	
		< IFT >	
IFT11	1-435-848-12	TRANSFORMER,IF(CERAMIC FILTER)	

Ref. No.	Part No.	Description			Remarks
		< JUMPER RESISTOR >			
JR1	1-216-864-11	METAL CHIP	0	5%	1/16W
JR2	1-216-864-11	METAL CHIP	0	5%	1/16W
JR3	1-216-864-11	METAL CHIP	0	5%	1/16W
JR4	1-216-864-11	METAL CHIP	0	5%	1/16W
JR5	1-216-864-11	METAL CHIP	0	5%	1/16W
JR6	1-216-864-11	METAL CHIP	0	5%	1/16W (EXCEPT AEP,UK)
JR7	1-216-864-11	METAL CHIP	0	5%	1/16W
JR8	1-216-864-11	METAL CHIP	0	5%	1/16W
JR10	1-216-864-11	METAL CHIP	0	5%	1/16W (EXCEPT AEP,UK)
JR11	1-216-864-11	METAL CHIP	0	5%	1/16W (AEP,UK)
JR12	1-216-864-11	METAL CHIP	0	5%	1/16W (EXCEPT AEP,UK)
JR13	1-216-864-11	METAL CHIP	0	5%	1/16W (AEP,UK)
JR14	1-216-864-11	METAL CHIP	0	5%	1/16W (AEP,UK)
JR15	1-216-864-11	METAL CHIP	0	5%	1/16W
JR19	1-216-864-11	METAL CHIP	0	5%	1/16W (EXCEPT AEP,UK)
JR22	1-216-864-11	METAL CHIP	0	5%	1/16W
JR24	1-216-864-11	METAL CHIP	0	5%	1/16W
JR25	1-216-864-11	METAL CHIP	0	5%	1/16W
JR26	1-216-864-11	METAL CHIP	0	5%	1/16W
JR27	1-216-864-11	METAL CHIP	0	5%	1/16W
JR29	1-216-864-11	METAL CHIP	0	5%	1/16W
JR30	1-216-864-11	METAL CHIP	0	5%	1/16W
JR31	1-216-864-11	METAL CHIP	0	5%	1/16W
JR32	1-216-864-11	METAL CHIP	0	5%	1/16W
JR33	1-216-864-11	METAL CHIP	0	5%	1/16W
JR34	1-216-864-11	METAL CHIP	0	5%	1/16W
JR271	1-216-864-11	METAL CHIP	0	5%	1/16W
JR272	1-216-864-11	METAL CHIP	0	5%	1/16W
JR273	1-216-864-11	METAL CHIP	0	5%	1/16W
JR400	1-216-864-11	METAL CHIP	0	5%	1/16W
JR416	1-216-864-11	METAL CHIP	0	5%	1/16W
JR418	1-216-864-11	METAL CHIP	0	5%	1/16W (EXCEPT AEP,UK)
JR420	1-216-864-11	METAL CHIP	0	5%	1/16W (EXCEPT AEP,UK)
JR462	1-216-864-11	METAL CHIP	0	5%	1/16W
		< COIL >			
L41	1-412-957-11	INDUCTOR	33uH (AEP,UK)		
L81	1-412-963-11	INDUCTOR	100uH (AEP,UK)		
L301	1-410-780-11	INDUCTOR	27MH		
L302	1-414-193-41	INDUCTOR	220uH		
L303	1-414-193-41	INDUCTOR	220uH		
L351	1-410-780-11	INDUCTOR	27MH		
L971	1-410-478-11	INDUCTOR	47uH		
		< FILTER >			
LPF11	1-234-612-11	FILTER, LOW PASS			
LPF12	1-234-612-11	FILTER, LOW PASS			
		< TRANSISTOR >			
Q1	8-729-055-80	TRANSISTOR 2SC1674LK-TP			
Q2	8-729-422-57	TRANSISTOR UN4111			
Q11	8-729-620-05	TRANSISTOR 2SC2603-EF			

MAIN

Ref. No.	Part No.	Description	Remarks
Q12	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q81	8-729-620-05	TRANSISTOR 2SC2603TP-EF (AEP,UK)	
Q111	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q113	8-729-026-68	TRANSISTOR 2SD2525(TP)	
Q114	8-729-900-36	TRANSISTOR DTC124ES	
Q121	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q141	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q171	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q301	8-729-801-93	TRANSISTOR 2SD1387-3	
Q302	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q303	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q304	8-729-900-63	TRANSISTOR DTA124ES	
Q305	8-729-900-80	TRANSISTOR DTC114ES	
Q391	8-729-140-04	TRANSISTOR 2SB1116A-L	
Q392	8-729-900-80	TRANSISTOR DTC114ES	
Q393	8-729-140-04	TRANSISTOR 2SB1116A-L	
Q394	8-729-900-80	TRANSISTOR DTC114ES	
Q395	8-729-900-80	TRANSISTOR DTC114ES	
Q396	8-729-116-57	TRANSISTOR 2SB1068-K	
Q397	8-729-900-80	TRANSISTOR DTC114ES	
Q501	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502	8-729-900-63	TRANSISTOR DTA124ES	
Q503	8-729-900-63	TRANSISTOR DTA124ES	
Q504	8-729-900-63	TRANSISTOR DTA124ES	
Q505	8-729-900-36	TRANSISTOR DTC124ES	
Q506	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q507	8-729-422-57	TRANSISTOR UN4111	

< RESISTOR >

Ref. No.	Part No.	Description			Remarks
R1	1-216-864-11	METAL CHIP	0	5%	1/16W
R3	1-216-805-11	METAL CHIP	47	5%	1/16W
R4	1-216-805-11	METAL CHIP	47	5%	1/16W
R5	1-216-819-11	METAL CHIP	680	5%	1/16W
R6	1-216-815-11	METAL CHIP	330	5%	1/16W
R7	1-216-819-11	METAL CHIP	680	5%	1/16W
R8	1-216-821-11	METAL CHIP	1K	5%	1/16W
R10	1-216-814-11	METAL CHIP	270	5%	1/16W
R12	1-216-833-11	METAL CHIP	10K	5%	1/16W
R13	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R14	1-216-814-11	METAL CHIP	270	5%	1/16W
R15	1-216-843-11	METAL CHIP	68K	5%	1/16W
R16	1-216-837-11	METAL CHIP	22K	5%	1/16W
R17	1-216-839-11	METAL CHIP	33K	5%	1/16W
R18	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R19	1-216-833-11	METAL CHIP	10K	5%	1/16W
R20	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R21	1-216-819-11	METAL CHIP	680	5%	1/16W (AEP,UK)
R21	1-216-821-11	METAL CHIP	1K	5%	1/16W (EXCEPT AEP,UK)
R22	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R23	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R24	1-216-819-11	METAL CHIP	680	5%	1/16W (AEP,UK)
R24	1-216-821-11	METAL CHIP	1K	5%	1/16W (EXCEPT AEP,UK)
R25	1-216-809-11	METAL CHIP	100	5%	1/16W
R26	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R27	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R28	1-216-849-11	METAL CHIP	220K	5%	1/16W
R29	1-216-849-11	METAL CHIP	220K	5%	1/16W
R30	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R31	1-216-864-11	METAL CHIP	0	5%	1/16W
R41	1-216-833-11	METAL CHIP	10K	5%	1/16W
R42	1-216-845-11	METAL CHIP	100K	5%	1/16W
R43	1-216-839-11	METAL CHIP	33K	5%	1/16W
R55	1-216-833-11	METAL CHIP	10K	5%	1/16W
R56	1-216-833-11	METAL CHIP	10K	5%	1/16W
R58	1-216-809-11	METAL CHIP	100	5%	1/16W
R59	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R60	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R61	1-216-809-11	METAL CHIP	100	5%	1/16W
R62	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R63	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R64	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R65	1-216-809-11	METAL CHIP	100	5%	1/16W
R66	1-216-833-11	METAL CHIP	10K	5%	1/16W
R67	1-216-833-11	METAL CHIP	10K	5%	1/16W
R68	1-216-821-11	METAL CHIP	1K	5%	1/16W
R69	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R81	1-216-851-11	METAL CHIP	330K	5%	1/16W (AEP,UK)
R83	1-216-821-11	METAL CHIP	1K	5%	1/16W (AEP,UK)
R84	1-216-817-11	METAL CHIP	470	5%	1/16W (AEP,UK)
R85	1-216-864-11	METAL CHIP	0	5%	1/16W (AEP,UK)
R86	1-216-805-11	METAL CHIP	47	5%	1/16W (AEP,UK)
R87	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (AEP,UK)
R88	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (AEP,UK)
R111	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R112	1-216-841-11	METAL CHIP	47K	5%	1/16W
R113	1-216-837-11	METAL CHIP	22K	5%	1/16W
R114	1-216-849-11	METAL CHIP	220K	5%	1/16W
R115	1-216-837-11	METAL CHIP	22K	5%	1/16W
⚠R121	1-215-891-11	METAL OXIDE	680	5%	2W
R122	1-216-821-11	METAL CHIP	1K	5%	1/16W
R124	1-216-837-11	METAL CHIP	22K	5%	1/16W
R141	1-216-821-11	METAL CHIP	1K	5%	1/16W
R142	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R143	1-216-817-11	METAL CHIP	470	5%	1/16W
⚠R171	1-215-891-11	METAL OXIDE	680	5%	2W
R172	1-216-821-11	METAL CHIP	1K	5%	1/16W
R174	1-216-837-11	METAL CHIP	22K	5%	1/16W
R175	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R301	1-216-837-11	METAL CHIP	22K	5%	1/16W
R302	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R303	1-216-809-11	METAL CHIP	100	5%	1/16W
R304	1-216-809-11	METAL CHIP	100	5%	1/16W
R305	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R306	1-216-833-11	METAL CHIP	10K	5%	1/16W
R307	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R308	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R309	1-216-837-11	METAL CHIP	22K	5%	1/16W
R311	1-216-857-11	METAL CHIP	1M	5%	1/16W
R312	1-218-745-11	RES-CHIP	160K	5%	1/16W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remarks
R313	1-216-845-11	METAL CHIP	100K	5%	1/16W
R315	1-216-833-11	METAL CHIP	10K	5%	1/16W
R316	1-216-839-11	METAL CHIP	33K	5%	1/16W
R317	1-216-833-11	METAL CHIP	10K	5%	1/16W
R318	1-216-833-11	METAL CHIP	10K	5%	1/16W
R319	1-216-852-11	METAL CHIP	390K	5%	1/16W
R320	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R321	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R331	1-216-846-11	METAL CHIP	120K	5%	1/16W
R332	1-216-809-11	METAL CHIP	100	5%	1/16W
R333	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R334	1-218-332-11	RES-CHIP	130K	5%	1/16W
R335	1-216-813-11	METAL CHIP	220	5%	1/16W
R336	1-216-846-11	METAL CHIP	120K	5%	1/16W
R337	1-216-813-11	METAL CHIP	220	5%	1/16W
R338	1-216-837-11	METAL CHIP	22K	5%	1/16W
R339	1-216-834-11	METAL CHIP	12K	5%	1/16W
R340	1-216-850-11	METAL CHIP	270K	5%	1/16W
R341	1-216-813-11	METAL CHIP	220	5%	1/16W
R342	1-216-834-11	METAL CHIP	12K	5%	1/16W
⚠R343	1-219-787-17	FUSIBLE	5.6	5%	1/4W
⚠R344	1-219-787-17	FUSIBLE	5.6	5%	1/4W
R345	1-216-836-11	METAL CHIP	18K	5%	1/16W
R346	1-216-836-11	METAL CHIP	18K	5%	1/16W
R347	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R348	1-216-820-11	METAL CHIP	820	5%	1/16W
R349	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R351	1-216-837-11	METAL CHIP	22K	5%	1/16W
R352	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R353	1-216-809-11	METAL CHIP	100	5%	1/16W
R354	1-216-809-11	METAL CHIP	100	5%	1/16W
R355	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R356	1-216-833-11	METAL CHIP	10K	5%	1/16W
R357	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R358	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R359	1-216-839-11	METAL CHIP	33K	5%	1/16W
R360	1-216-821-11	METAL CHIP	1K	5%	1/16W
R361	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R362	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R363	1-216-821-11	METAL CHIP	1K	5%	1/16W
R364	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R365	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R366	1-216-841-11	METAL CHIP	47K	5%	1/16W
R367	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R368	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R369	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R371	1-216-841-11	METAL CHIP	47K	5%	1/16W
R372	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R373	1-216-821-11	METAL CHIP	1K	5%	1/16W
R374	1-216-841-11	METAL CHIP	47K	5%	1/16W
R375	1-218-296-11	RES-CHIP	75K	5%	1/16W
R376	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R377	1-216-841-11	METAL CHIP	47K	5%	1/16W
R378	1-218-296-11	RES-CHIP	75K	5%	1/16W
R381	1-216-846-11	METAL CHIP	120K	5%	1/16W
R382	1-216-809-11	METAL CHIP	100	5%	1/16W
R383	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R384	1-218-332-11	RES-CHIP	130K	5%	1/16W
R385	1-216-864-11	METAL CHIP	0	5%	1/16W
R386	1-216-846-11	METAL CHIP	120K	5%	1/16W
R387	1-216-813-11	METAL CHIP	220	5%	1/16W
R388	1-216-837-11	METAL CHIP	22K	5%	1/16W
R389	1-216-834-11	METAL CHIP	12K	5%	1/16W
R390	1-216-850-11	METAL CHIP	270K	5%	1/16W
R391	1-216-864-11	METAL CHIP	0	5%	1/16W
R392	1-216-834-11	METAL CHIP	12K	5%	1/16W
R393	1-216-837-11	METAL CHIP	22K	5%	1/16W
R394	1-216-813-11	METAL CHIP	220	5%	1/16W
R396	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R397	1-216-820-11	METAL CHIP	820	5%	1/16W
R398	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R400	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R401	1-216-809-11	METAL CHIP	100	5%	1/16W
R402	1-216-809-11	METAL CHIP	100	5%	1/16W
R403	1-216-809-11	METAL CHIP	100	5%	1/16W
R404	1-216-809-11	METAL CHIP	100	5%	1/16W
R405	1-216-809-11	METAL CHIP	100	5%	1/16W
R406	1-216-809-11	METAL CHIP	100	5%	1/16W
R407	1-216-809-11	METAL CHIP	100	5%	1/16W
R409	1-216-833-11	METAL CHIP	10K	5%	1/16W
R410	1-216-833-11	METAL CHIP	10K	5%	1/16W
R411	1-216-851-11	METAL CHIP	330K	5%	1/16W
R413	1-216-864-11	METAL CHIP	0	5%	1/16W
R417	1-216-833-11	METAL CHIP	10K	5%	1/16W
R419	1-216-809-11	METAL CHIP	100	5%	1/16W
R421	1-216-845-11	METAL CHIP	100K	5%	1/16W
R422	1-216-833-11	METAL CHIP	10K	5%	1/16W
R423	1-216-833-11	METAL CHIP	10K	5%	1/16W
R429	1-216-809-11	METAL CHIP	100	5%	1/16W
R430	1-216-809-11	METAL CHIP	100	5%	1/16W
R431	1-216-841-11	METAL CHIP	47K	5%	1/16W
R435	1-216-817-11	METAL CHIP	470	5%	1/16W
R436	1-216-817-11	METAL CHIP	470	5%	1/16W
R437	1-216-817-11	METAL CHIP	470	5%	1/16W
R438	1-216-809-11	METAL CHIP	100	5%	1/16W
R439	1-216-809-11	METAL CHIP	100	5%	1/16W
R440	1-216-809-11	METAL CHIP	100	5%	1/16W
R441	1-216-833-11	METAL CHIP	10K	5%	1/16W
R442	1-216-809-11	METAL CHIP	100	5%	1/16W
R443	1-216-809-11	METAL CHIP	100	5%	1/16W
R447	1-216-809-11	METAL CHIP	100	5%	1/16W
R448	1-216-809-11	METAL CHIP	100	5%	1/16W
R449	1-216-845-11	METAL CHIP	100K	5%	1/16W
R450	1-216-845-11	METAL CHIP	100K	5%	1/16W
R451	1-216-833-11	METAL CHIP	10K	5%	1/16W
R453	1-216-833-11	METAL CHIP	10K	5%	1/16W
R456	1-216-809-11	METAL CHIP	100	5%	1/16W
R457	1-216-809-11	METAL CHIP	100	5%	1/16W
R468	1-216-833-11	METAL CHIP	10K	5%	1/16W
R469	1-216-833-11	METAL CHIP	10K	5%	1/16W
R470	1-216-809-11	METAL CHIP	100	5%	1/16W
R471	1-216-809-11	METAL CHIP	100	5%	1/16W
R472	1-216-809-11	METAL CHIP	100	5%	1/16W
R473	1-216-809-11	METAL CHIP	100	5%	1/16W
R474	1-216-809-11	METAL CHIP	100	5%	1/16W
R475	1-216-809-11	METAL CHIP	100	5%	1/16W
R476	1-216-809-11	METAL CHIP	100	5%	1/16W
R477	1-216-809-11	METAL CHIP	100	5%	1/16W
R478	1-216-809-11	METAL CHIP	100	5%	1/16W
R479	1-216-809-11	METAL CHIP	100	5%	1/16W
R480	1-216-809-11	METAL CHIP	100	5%	1/16W
R481	1-216-809-11	METAL CHIP	100	5%	1/16W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

MAIN MB

Ref. No.	Part No.	Description			Remarks
R482	1-216-809-11	METAL CHIP	100	5%	1/16W
R483	1-216-809-11	METAL CHIP	100	5%	1/16W
R484	1-216-809-11	METAL CHIP	100	5%	1/16W
R485	1-216-809-11	METAL CHIP	100	5%	1/16W
R486	1-216-809-11	METAL CHIP	100	5%	1/16W
R487	1-216-833-11	METAL CHIP	10K	5%	1/16W
R488	1-216-833-11	METAL CHIP	10K	5%	1/16W
R489	1-216-833-11	METAL CHIP	10K	5%	1/16W
R490	1-216-833-11	METAL CHIP	10K	5%	1/16W
R491	1-216-833-11	METAL CHIP	10K	5%	1/16W
R492	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R493	1-216-864-11	METAL CHIP	0	5%	1/16W (AEP,UK)
R493	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (EA)
R493	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (US,CND)
R493	1-216-821-11	METAL CHIP	1K	5%	1/16W (E,MX)
R495	1-216-809-11	METAL CHIP	100	5%	1/16W
R496	1-216-833-11	METAL CHIP	10K	5%	1/16W
R497	1-216-833-11	METAL CHIP	10K	5%	1/16W
R498	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R499	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (US,CND,E,MX)
R499	1-216-821-11	METAL CHIP	1K	5%	1/16W (EA)
R499	1-216-864-11	METAL CHIP	0	5%	1/16W (AUS,E91,SP,MY,TH)
R501	1-216-821-11	METAL CHIP	1K	5%	1/16W
R502	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R503	1-216-841-11	METAL CHIP	47K	5%	1/16W
R504	1-216-841-11	METAL CHIP	47K	5%	1/16W
R505	1-216-833-11	METAL CHIP	10K	5%	1/16W
R506	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R507	1-216-845-11	METAL CHIP	100K	5%	1/16W
R508	1-216-837-11	METAL CHIP	22K	5%	1/16W
R509	1-216-821-11	METAL CHIP	1K	5%	1/16W
R510	1-216-841-11	METAL CHIP	47K	5%	1/16W
R511	1-216-833-11	METAL CHIP	10K	5%	1/16W
R512	1-216-821-11	METAL CHIP	1K	5%	1/16W
R514	1-216-821-11	METAL CHIP	1K	5%	1/16W
R546	1-216-833-11	METAL CHIP	10K	5%	1/16W
R547	1-216-833-11	METAL CHIP	10K	5%	1/16W
R961	1-216-837-11	METAL CHIP	22K	5%	1/16W
R962	1-216-837-11	METAL CHIP	22K	5%	1/16W
R963	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
		< COMPOSITION CIRCUIT BLOCK >			
RB41	1-234-575-11	ENCAPSULATED COMPONENT			
		< VARIABLE RESISTOR >			
RV11	1-241-765-11	RES, ADJ, CARBON 22K (FM TUNED LEVEL)			
RV301	1-241-764-11	RES, ADJ, CARBON 10K (REC LEVEL (L) DECK (B))			
RV302	1-241-762-11	RES, ADJ, CARBON 2.2K (PB LEVEL (L) DECK (A))			
RV303	1-241-762-11	RES, ADJ, CARBON 2.2K (PB LEVEL (L) DECK (B))			
RV304	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS (L))			
RV351	1-241-764-11	RES, ADJ, CARBON 10K (REC LEVEL (R) DECK (B))			
RV354	1-241-768-11	RES, ADJ, CARBON 220K (REC BIAS (R))			
		< TRANSFORMER >			
T11	1-435-792-11	TRANSFORMER, DISCRIMINATOR			
T301	1-423-980-11	TRANSFORMER, BIAS OSCILLATION			
		< TERMINAL >			
TM1	1-694-556-22	TERMINAL BOARD (ANT.PAL) (AEP,UK)			
TM1	1-694-555-22	TERMINAL BOARD (4P) (EXCEPT AEP,UK)			
		< VIBRATOR >			
X51	1-760-549-31	VIBRATOR, CRYSTAL (4.5MHz)			
X81	1-579-900-21	VIBRATOR, CRYSTAL (4.332MHz) (AEP,UK)			
X401	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X402	1-781-107-21	VIBRATOR, SERAMIC (16MHz)			
**********					
	A-4727-088-A	MB BOARD, COMPLETE (TH)			
	A-4727-126-A	MB BOARD, COMPLETE (US,CND)			
	A-4727-147-A	MB BOARD, COMPLETE (AEP,UK)			
	A-4727-152-A	MB BOARD, COMPLETE (EA)			
	A-4727-167-A	MB BOARD, COMPLETE (SP,MY)			
	A-4727-172-A	MB BOARD, COMPLETE (AUS)			
	A-4727-203-A	MB BOARD, COMPLETE (E,MX)			
	A-4727-272-A	MB BOARD, COMPLETE (E91)			
		**********			
		< CAPACITOR >			
C004	1-126-204-11	ELECT CHIP	47uF	20%	16V
C005	1-126-246-11	ELECT CHIP	220uF	20%	4V
C006	1-126-204-11	ELECT CHIP	47uF	20%	16V
C007	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C018	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C019	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C103	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C104	1-126-209-11	ELECT CHIP	100uF	20%	4V
C105	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C106	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C107	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C108	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C109	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C110	1-126-209-11	ELECT CHIP	100uF	20%	4V
C111	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C112	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C113	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C114	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C116	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C119	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C124	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C202	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C203	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C204	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C205	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C206	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C207	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C301	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C304	1-126-246-11	ELECT CHIP	220uF	20%	4V
C305	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C306	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C307	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C309	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C310	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C311	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V

Ref. No.	Part No.	Description			Remarks
C312	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C313	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C315	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C317	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C318	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C319	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C320	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C321	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C322	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C323	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C324	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C325	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C326	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C327	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C328	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C331	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C332	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C334	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C335	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C336	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C337	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C338	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C339	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C340	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C341	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C342	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C343	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C344	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C345	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C346	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C347	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C348	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C349	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C350	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C351	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C352	1-126-204-11	ELECT CHIP	47uF	20%	16V
C401	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C402	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C403	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C404	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C405	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C406	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C407	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C408	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C411	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C412	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C413	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C414	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C415	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C416	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C417	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C418	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C419	1-126-204-11	ELECT CHIP	47uF	20%	16V
C420	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C429	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C430	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C501	1-126-193-11	ELECT	1uF	20%	50V
C502	1-117-370-11	CERAMIC CHIP	10uF		10V
C503	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C504	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C505	1-117-370-11	CERAMIC CHIP	10uF		10V
C506	1-117-370-11	CERAMIC CHIP	10uF		10V
C508	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C509	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C510	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C511	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C512	1-126-246-11	ELECT CHIP	220uF	20%	4V
C513	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C514	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C516	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C518	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C519	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C520	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C521	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C522	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C523	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C524	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C525	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C526	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C529	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C530	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C531	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C532	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C533	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C534	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C535	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C536	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C537	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C538	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C539	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C540	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C541	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C542	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C545	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C546	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C547	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C701	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C702	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C711	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C712	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C716	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C717	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C721	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C722	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
C741	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C742	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C743	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C744	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C745	1-124-778-00	ELECT CHIP	22uF	20%	6.3V
C764	1-126-193-11	ELECT	1uF	20%	50V
C765	1-126-193-11	ELECT	1uF	20%	50V
C766	1-126-193-11	ELECT	1uF	20%	50V

< CONNECTOR >

Ref. No.	Part No.	Description
CN008	1-779-992-11	PIN, CONNECTOR (PWB) 8P
CN009	1-784-135-11	CONNECTOR (FFC) 9P
CN010	1-784-146-11	CONNECTOR (FFC) 25P
* CN011	1-778-867-11	CONNECTOR, FFC/FPC 6P
CN101	1-784-371-21	CONNECTOR, FFC/FPC 12P
CN103	1-793-687-11	PIN, CONNECTOR (1.5MM) (SMD)5P
CN202	1-766-382-21	PIN, CONNECTOR (1.5MM)(SMD)10P

MB

Ref. No.	Part No.	Description			Remarks
CN404	1-793-687-11	PIN, CONNECTOR (1.5MM) (SMD)5P			
		< FERRITE BEAD >			
FB007	1-469-324-21	FERRITE	0UH		
FB008	1-469-324-21	FERRITE	0UH		
FB009	1-469-324-21	FERRITE	0UH		
FB010	1-469-324-21	FERRITE	0UH		
FB011	1-469-324-21	FERRITE	0UH		
FB012	1-469-324-21	FERRITE	0UH		
FB112	1-216-864-11	METAL CHIP	0	5% 1/16W	
FB711	1-216-864-11	METAL CHIP	0	5% 1/16W	
FB712	1-216-864-11	METAL CHIP	0	5% 1/16W	
FB714	1-216-864-11	METAL CHIP	0	5% 1/16W	
		< FILTER >			
FL003	1-234-177-21	FILTER, CHIP EMI			
FL004	1-234-177-21	FILTER, CHIP EMI			
FL005	1-233-893-21	FILTER, CHIP EMI			
FL101	1-233-893-21	FILTER, CHIP EMI			
FL102	1-233-893-21	FILTER, CHIP EMI			
FL103	1-233-893-21	FILTER, CHIP EMI			
FL202	1-233-893-21	FILTER, CHIP EMI			
FL203	1-233-893-21	FILTER, CHIP EMI			
FL204	1-234-177-21	FILTER, CHIP EMI			
FL501	1-233-893-21	FILTER, CHIP EMI			
FL502	1-233-893-21	FILTER, CHIP EMI			
FL505	1-234-177-21	FILTER, CHIP EMI			
		< IC >			
IC006	6-700-398-01	IC uPC2918T-E1			
IC101	8-759-640-41	IC BR24C08F-E2			
IC102	8-759-831-81	IC IMIC6001BTD			
IC103	8-759-829-75	IC MB91307APFV-G-BND-E1			
IC106	8-759-645-76	IC TC74VHCT32AFT			
IC107	8-759-826-41	IC MBM29DL324BE-90PFTN			
IC202	6-700-740-01	IC LC22004A-RJ6-TBM-E			
IC301	8-759-599-45	IC MM1385ENLE			
IC302	8-759-828-01	IC CXD9635R			
IC303	8-759-683-75	IC MSM51V8160F-60TSKR1			
IC401	8-759-826-42	IC FAN8034			
IC501	8-759-832-30	IC TK71518ASCL			
IC502	8-759-599-45	IC MM1385ENLE			
IC503	8-752-399-55	IC CXD1932Q			
IC504	8-759-663-74	IC HY57V161610DTC-7TR			
IC505	8-759-663-74	IC HY57V161610DTC-7TR			
IC701	8-759-680-28	IC BA7666FS-E2			
		< COIL >			
L701	1-412-788-41	INDUCTOR	10uH		
L711	1-412-790-31	INDUCTOR	15uH		
L713	1-412-790-31	INDUCTOR	15uH		
L715	1-412-790-31	INDUCTOR	15uH		
		< TRANSISTOR >			
Q711	8-729-027-23	TRANSISTOR DTA114EKA-T146			
Q712	1-801-806-11	TRANSISTOR DTC144EKA			
		< RESISTOR >			
R017	1-216-864-11	METAL CHIP	0	5% 1/16W	
R021	1-216-864-11	METAL CHIP	0	5% 1/16W	
R076	1-216-837-11	METAL CHIP	22K	5% 1/10W (TYPE A)	
R077	1-216-815-11	METAL CHIP	330	5% 1/10W (TYPE A)	
R077	1-216-833-11	METAL CHIP	10K	5% 1/10W (TYPE B)	
R078	1-216-827-11	METAL CHIP	3.3K	5% 1/10W	
R079	1-216-801-11	METAL CHIP	22	5% 1/10W (TYPE A)	
R079	1-216-845-11	METAL CHIP	100K	5% 1/10W (TYPE B)	
R101	1-216-789-11	METAL CHIP	2.2	5% 1/16W	
R105	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R107	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R109	1-216-797-11	METAL CHIP	10	5% 1/16W	
R111	1-216-817-11	METAL CHIP	470	5% 1/16W	
R112	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R113	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R114	1-216-845-11	METAL CHIP	100K	5% 1/16W	
R116	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R117	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R118	1-216-821-11	METAL CHIP	1K	5% 1/16W	
R119	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R121	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R123	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R124	1-216-797-11	METAL CHIP	10	5% 1/16W	
R125	1-216-797-11	METAL CHIP	10	5% 1/16W	
R126	1-216-797-11	METAL CHIP	10	5% 1/16W	
R128	1-216-827-11	METAL CHIP	3.3K	5% 1/16W	
R129	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R130	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R131	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R132	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R133	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R134	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R136	1-216-797-11	METAL CHIP	10	5% 1/16W	
R137	1-216-797-11	METAL CHIP	10	5% 1/16W	
R138	1-216-797-11	METAL CHIP	10	5% 1/16W	
R140	1-216-797-11	METAL CHIP	10	5% 1/16W	
R141	1-216-797-11	METAL CHIP	10	5% 1/16W	
R142	1-216-797-11	METAL CHIP	10	5% 1/16W	
R143	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R145	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R146	1-216-833-11	METAL CHIP	10K	5% 1/16W	
R147	1-216-825-11	METAL CHIP	2.2K	5% 1/16W	
R149	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R150	1-216-839-11	METAL CHIP	33K	5% 1/16W (E,MX)	
R150	1-216-835-11	METAL CHIP	15K	5% 1/16W (AEP,UK)	
R150	1-216-831-11	METAL CHIP	6.8K	5% 1/16W (SP,MY,TH)	
R150	1-216-829-11	METAL CHIP	4.7K	5% 1/16W (E91)	
R150	1-216-821-11	METAL CHIP	1K	5% 1/16W (EA)	
R150	1-216-827-11	METAL CHIP	3.3K	5% 1/16W (AUS)	
R151	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R152	1-216-839-11	METAL CHIP	33K	5% 1/16W (TH)	
R152	1-216-835-11	METAL CHIP	15K	5% 1/16W (EXCEPT TH)	
R153	1-216-829-11	METAL CHIP	4.7K	5% 1/16W	
R154	1-216-843-11	METAL CHIP	68K	5% 1/16W (AEP,EA,UK)	
R154	1-216-839-11	METAL CHIP	33K	5% 1/16W (SP,MY,TH)	

Ref. No.	Part No.	Description			Remarks
R154	1-216-833-11	METAL CHIP	10K	5%	1/16W (E91)
R154	1-216-835-11	METAL CHIP	15K	5%	1/16W (AUS,E,MX)
R155	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R156	1-216-833-11	METAL CHIP	10K	5%	1/16W
R157	1-216-864-11	METAL CHIP	0	5%	1/16W
R160	1-216-833-11	METAL CHIP	10K	5%	1/16W
R161	1-216-864-11	METAL CHIP	0	5%	1/16W
R162	1-216-833-11	METAL CHIP	10K	5%	1/16W
R164	1-216-809-11	METAL CHIP	100	5%	1/16W
R165	1-216-809-11	METAL CHIP	100	5%	1/16W
R166	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R167	1-216-821-11	METAL CHIP	1K	5%	1/16W
R168	1-216-821-11	METAL CHIP	1K	5%	1/16W
R170	1-216-821-11	METAL CHIP	1K	5%	1/16W
R172	1-216-833-11	METAL CHIP	10K	5%	1/16W
R174	1-216-797-11	METAL CHIP	10	5%	1/16W
R175	1-216-864-11	METAL CHIP	0	5%	1/16W
R179	1-216-833-11	METAL CHIP	10K	5%	1/16W
R182	1-216-845-11	METAL CHIP	100K	5%	1/16W
R183	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R184	1-216-833-11	METAL CHIP	10K	5%	1/16W
R185	1-216-833-11	METAL CHIP	10K	5%	1/16W
R186	1-216-833-11	METAL CHIP	10K	5%	1/16W
R187	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R188	1-216-833-11	METAL CHIP	10K	5%	1/16W
R191	1-216-864-11	METAL CHIP	0	5%	1/16W
R192	1-216-864-11	METAL CHIP	0	5%	1/16W
R199	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R202	1-216-809-11	METAL CHIP	100	5%	1/16W
R204	1-216-821-11	METAL CHIP	1K	5%	1/16W
R205	1-216-821-11	METAL CHIP	1K	5%	1/16W
R206	1-216-813-11	METAL CHIP	220	5%	1/16W
R207	1-216-813-11	METAL CHIP	220	5%	1/16W
R211	1-216-821-11	METAL CHIP	1K	5%	1/16W
R212	1-216-821-11	METAL CHIP	1K	5%	1/16W
R214	1-216-833-11	METAL CHIP	10K	5%	1/16W
R215	1-216-833-11	METAL CHIP	10K	5%	1/16W
R299	1-216-847-11	METAL CHIP	150K	5%	1/16W
R301	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R302	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R305	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R306	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R307	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R308	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R309	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R310	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R311	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R312	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R313	1-216-817-11	METAL CHIP	470	5%	1/16W
R314	1-216-817-11	METAL CHIP	470	5%	1/16W
R315	1-216-817-11	METAL CHIP	470	5%	1/16W
R316	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R317	1-216-833-11	METAL CHIP	10K	5%	1/16W
R318	1-216-864-11	METAL CHIP	0	5%	1/16W
R319	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R320	1-216-864-11	METAL CHIP	0	5%	1/16W
R321	1-216-817-11	METAL CHIP	470	5%	1/16W
R328	1-216-833-11	METAL CHIP	10K	5%	1/16W
R329	1-216-864-11	METAL CHIP	0	5%	1/16W
R330	1-216-864-11	METAL CHIP	0	5%	1/16W
R332	1-216-864-11	METAL CHIP	0	5%	1/16W
R334	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R335	1-218-855-11	METAL CHIP	2.2K	0.5%	1/10W
R336	1-216-833-11	METAL CHIP	10K	5%	1/16W
R337	1-216-809-11	METAL CHIP	100	5%	1/16W
R338	1-218-879-11	METAL CHIP	22K	0.5%	1/10W
R341	1-218-871-11	METAL CHIP	10K	0.5%	1/10W
R342	1-218-883-11	METAL CHIP	33K	0.5%	1/10W
R343	1-218-831-11	METAL CHIP	220	0.5%	1/10W
R344	1-218-847-11	METAL CHIP	1K	0.5%	1/10W
R345	1-216-833-11	METAL CHIP	10K	5%	1/16W
R349	1-216-838-11	METAL CHIP	27K	5%	1/16W
R350	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R351	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R352	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R356	1-218-853-11	METAL CHIP	1.8K	0.5%	1/10W
R368	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R384	1-216-797-11	METAL CHIP	10	5%	1/16W
R385	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R406	1-216-846-11	METAL CHIP	120K	5%	1/16W
R407	1-216-846-11	METAL CHIP	120K	5%	1/16W
R408	1-216-847-11	METAL CHIP	150K	5%	1/16W
R409	1-216-847-11	METAL CHIP	150K	5%	1/16W
R410	1-216-842-11	METAL CHIP	56K	5%	1/16W
R411	1-216-842-11	METAL CHIP	56K	5%	1/16W
R412	1-216-850-11	METAL CHIP	270K	5%	1/16W
R413	1-216-833-11	METAL CHIP	10K	5%	1/16W
R414	1-216-853-11	METAL CHIP	470K	5%	1/16W
R415	1-216-846-11	METAL CHIP	120K	5%	1/16W
R416	1-216-855-11	METAL CHIP	680K	5%	1/16W
R417	1-216-833-11	METAL CHIP	10K	5%	1/16W
R418	1-216-839-11	METAL CHIP	33K	5%	1/16W
R419	1-216-839-11	METAL CHIP	33K	5%	1/16W
R420	1-216-853-11	METAL CHIP	470K	5%	1/16W
R421	1-216-839-11	METAL CHIP	33K	5%	1/16W
R422	1-216-839-11	METAL CHIP	33K	5%	1/16W
R423	1-216-839-11	METAL CHIP	33K	5%	1/16W
R424	1-216-839-11	METAL CHIP	33K	5%	1/16W
R425	1-216-849-11	METAL CHIP	220K	5%	1/16W
R426	1-216-853-11	METAL CHIP	470K	5%	1/16W
R427	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R428	1-216-839-11	METAL CHIP	33K	5%	1/16W
R429	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R430	1-218-895-11	METAL CHIP	100K	0.5%	1/10W
R431	1-218-889-11	METAL CHIP	56K	0.5%	1/10W
R432	1-216-833-11	METAL CHIP	10K	5%	1/16W
R433	1-216-833-11	METAL CHIP	10K	5%	1/16W
R434	1-216-815-11	METAL CHIP	330	5%	1/16W
R435	1-216-833-11	METAL CHIP	10K	5%	1/16W
R439	1-216-864-11	METAL CHIP	0	5%	1/16W
R507	1-216-809-11	METAL CHIP	100	5%	1/16W
R508	1-216-864-11	METAL CHIP	0	5%	1/16W
R509	1-216-864-11	METAL CHIP	0	5%	1/16W
R510	1-216-833-11	METAL CHIP	10K	5%	1/16W
R511	1-216-813-11	METAL CHIP	220	5%	1/16W
R512	1-216-813-11	METAL CHIP	220	5%	1/16W
R513	1-216-813-11	METAL CHIP	220	5%	1/16W
R514	1-216-813-11	METAL CHIP	220	5%	1/16W
R515	1-216-813-11	METAL CHIP	220	5%	1/16W
R516	1-216-813-11	METAL CHIP	220	5%	1/16W
R517	1-216-833-11	METAL CHIP	10K	5%	1/16W
R518	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R521	1-216-864-11	METAL CHIP	0	5%	1/16W
R522	1-216-827-11	METAL CHIP	3.3K	5%	1/16W

MB | MOTOR | OPT IN | PANEL

Ref. No.	Part No.	Description			Remarks
R524	1-216-833-11	METAL CHIP	10K	5%	1/16W
R525	1-216-833-11	METAL CHIP	10K	5%	1/16W
R532	1-216-833-11	METAL CHIP	10K	5%	1/16W
R533	1-216-797-11	METAL CHIP	10	5%	1/16W
R554	1-216-797-11	METAL CHIP	10	5%	1/16W
R701	1-216-833-11	METAL CHIP	10K	5%	1/16W
R711	1-218-289-11	RES-CHIP	510	5%	1/16W
R712	1-218-289-11	RES-CHIP	510	5%	1/16W
R713	1-218-289-11	RES-CHIP	510	5%	1/16W
R717	1-218-285-11	RES-CHIP	75	5%	1/16W
R718	1-218-285-11	RES-CHIP	75	5%	1/16W
R719	1-218-285-11	RES-CHIP	75	5%	1/16W
R724	1-216-833-11	METAL CHIP	10K	5%	1/16W
R725	1-216-833-11	METAL CHIP	10K	5%	1/16W
R737	1-216-864-11	METAL CHIP	0	5%	1/16W
R738	1-216-864-11	METAL CHIP	0	5%	1/16W
		< VARIABLE RESISTOR >			
RV501	1-223-583-11	RES, ADJ, CARBON 1K			
		< VIBRATOR >			
X101	1-795-174-11	VIBRATOR, CERAMIC (16.5MHz)			
X102	1-767-519-11	VIBRATOR, CRYSTAL (27MHz)			
**********					
	1-682-791-11	MOTOR BOARD			
		**********			
		< CAPACITOR >			
C721	1-162-306-11	CERAMIC	0.01uF	30%	16V
		< CONNECTOR >			
CN721	1-770-516-31	CONNECTOR, FFC 8P			
CN722	1-785-330-11	PIN, CONNECTOR (LIGHT ANGLE)4P			
CN723	1-785-328-11	PIN, CONNECTOR (LIGHT ANGRE)2P			
		< RESISTOR >			
R721	1-249-415-11	CARBON	680	5%	1/4W F
		< SWITCH >			
S701	1-771-822-11	SWITCH, LEVER (SLIDE) (OPEN/CLOSE)			
**********					
	1-680-279-11	OPT IN BOARD			
		**********			
		< CAPACITOR >			
C1195	1-126-791-11	ELECT	10uF	20%	16V
C1196	1-164-159-11	CERAMIC	0.1uF		50V
		< FERRITE BEAD >			
FB1195	1-412-473-21	INDUCTOR	0UH		
		< IC >			
IC1195	8-749-018-63	IC GP1FA501RZ (DIGITAL IN (OPTICAL))			
**********					
	A-4727-117-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD) (US)			
	A-4727-133-A	PANEL BOARD, COMPLETE (including CD PANEL BOALD) (CND)			
	A-4727-141-A	PANEL BOARD, COMPLETE (incuding CD PANEL BOARD) (AEP,UK)			
	A-4727-155-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD) (AUS,E,E91,EA,MX,SP,MY)			
	A-4727-219-A	PANEL BOARD, COMPLETE (including CD PANEL BOARD)(TH)			
**********					
	4-224-584-01	HOLDER (FL)			
		< CAPACITOR >			
C1102	1-162-282-31	CERAMIC	100PF	10%	50V
C1103	1-162-282-31	CERAMIC	100PF	10%	50V
C1104	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1105	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1106	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1107	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1108	1-124-589-11	ELECT	47uF	20%	16V
C1109	1-162-294-31	CERAMIC	0.001uF	10%	50V
C1110	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1111	1-164-159-11	CERAMIC	0.1uF		50V
C1112	1-164-159-11	CERAMIC	0.1uF		50V
C1113	1-164-159-11	CERAMIC	0.1uF		50V
C1114	1-164-159-11	CERAMIC	0.1uF		50V
C1120	1-162-282-31	CERAMIC	100PF	10%	50V
C1121	1-162-282-31	CERAMIC	100PF	10%	50V
C1122	1-162-282-31	CERAMIC	100PF	10%	50V
C1123	1-162-282-31	CERAMIC	100PF	10%	50V
C1124	1-162-282-31	CERAMIC	100PF	10%	50V
C1125	1-162-282-31	CERAMIC	100PF	10%	50V
C1126	1-162-282-31	CERAMIC	100PF	10%	50V
C1127	1-162-282-31	CERAMIC	100PF	10%	50V
C1128	1-162-282-31	CERAMIC	100PF	10%	50V
C1129	1-162-282-31	CERAMIC	100PF	10%	50V
C1130	1-162-282-31	CERAMIC	100PF	10%	50V
C1131	1-162-282-31	CERAMIC	100PF	10%	50V
C1132	1-162-282-31	CERAMIC	100PF	10%	50V
C1133	1-126-796-11	ELECT	22uF	20%	50V
C1134	1-126-796-11	ELECT	22uF	20%	50V
C1135	1-126-513-11	ELECT	47uF	20%	6.3V
C1137	1-162-294-31	CERAMIC	0.001uF	10%	50V
C1138	1-162-306-11	CERAMIC	0.01uF	30%	16V
C1139	1-126-163-11	ELECT	4.7uF	20%	50V
C1140	1-164-159-11	CERAMIC	0.1uF		50V
C1141	1-162-282-31	CERAMIC	100PF	10%	50V
C1142	1-162-282-31	CERAMIC	100PF	10%	50V
C1143	1-162-282-31	CERAMIC	100PF	10%	50V
C1203	1-162-306-11	CERAMIC	0.01uF	30%	16V (AUS,E,E91,EA,MX,SP,MY,TH)
C1204	1-115-868-11	ELECT	0.22uF	20%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1205	1-162-294-31	CERAMIC	0.001uF	10%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1206	1-162-215-31	CERAMIC	47PF	5%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1207	1-162-290-31	CERAMIC	470PF	10%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1208	1-115-867-11	ELECT	0.1uF	20%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1209	1-115-872-11	ELECT	2.2uF	20%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1210	1-162-284-31	CERAMIC	150PF	10%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1211	1-115-872-11	ELECT	2.2uF	20%	50V (AUS,E,E91,EA,MX,SP,MY,TH)
C1212	1-124-584-00	ELECT	100uF	20%	10V (AUS,E,E91,EA,MX,SP,MY,TH)

Ref. No.	Part No.	Description	Remarks
C1213	1-126-157-11	ELECT 10uF 20% 16V	(AUS,E,E91,EA,MX,SP,MY,TH)
C1214	1-126-157-11	ELECT 10uF 20% 16V	(AUS,E,E91,EA,MX,SP,MY,TH)
C1215	1-162-215-31	CERAMIC 47PF 5% 50V	(AUS,E,E91,EA,MX,SP,MY,TH)
C1216	1-126-791-11	ELECT 10uF 20% 16V	(AUS,E,E91,EA,MX,SP,MY,TH)
C1241	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1242	1-162-294-31	CERAMIC 0.001uF 10% 50V	
C1250	1-164-159-11	CERAMIC 0.1uF 50V	(AUS,E,E91,EA,MX,SP,MY,TH)
		< CONNECTOR >	
CN1101	1-793-767-11	CONNECTOR, BOARD TO BOARD 30P	
CN1108	1-784-726-11	CONNECTOR, FFC 4P	
		< DIODE >	
D1101	8-719-057-97	DIODE SEL5923A-TP15 (GAME)	
D1102	8-719-057-97	DIODE SEL5923A-TP15 (DIGITAL)	
D1103	8-719-057-97	DIODE SEL5923A-TP15 (MD (VIDEO))	
D1104	8-719-071-41	DIODE SELS5923C-TP15 (TAPE A/B)	
D1105	8-719-071-41	DIODE SELS5923C-TP15 (TUNER/BAND)	
D1106	8-719-071-41	DIODE SELS5923C-TP15 (DVD)	
D1107	8-719-072-76	DIODE SEL5E23C-TP15	(MULTI CHANNEL DECODING)
D1108	8-719-063-93	DIODE SLR325VC-N-T32 (ENTER)	
D1110	8-719-050-84	DIODE RB441Q-40T-77	
D1111	8-719-057-97	DIODE SEL5923A-TP15 (EFFECT)	
D1112	8-719-057-97	DIODE SEL5923A-TP15 (GROOVE)	
D1113	8-719-063-93	DIODE SLR325VC-N-T32 (REC PAUSE/START)	
D1121	8-719-911-19	DIODE 1SS119-25	
		< FERRITE BEAD >	
FB1101	1-412-473-21	INDUCTOR 0UH	
		< FILTER >	
FL1101	1-518-722-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC1101	6-800-934-01	IC MB90M407APF-G-115-BND	
IC1102	8-759-827-69	IC NJL63H400A-1	
IC1201	8-759-636-55	IC M5218AFP-TE1(AUS,E,E91,EA,MX,SP,MY,TH)	
		< JACK >	
J1101	1-691-293-21	JACK (PHONES)	
J1202	1-815-603-11	JACK (MIC) (AUS,E,E91,EA,MX,SP,MY,TH)	
		< TRANSISTOR >	
Q1101	8-729-900-80	TRANSISTOR DTC114ES	
Q1102	8-729-900-80	TRANSISTOR DTC114ES	
Q1103	8-729-900-80	TRANSISTOR DTC114ES	
Q1104	8-729-900-80	TRANSISTOR DTC114ES	
Q1105	8-729-900-80	TRANSISTOR DTC114ES	
Q1106	8-729-900-80	TRANSISTOR DTC114ES	
Q1107	8-729-900-80	TRANSISTOR DTC114ES	
Q1108	8-729-900-80	TRANSISTOR DTC114ES	
Q1109	8-729-422-57	TRANSISTOR UN4111	
Q1110	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1111	8-729-900-80	TRANSISTOR DTC114ES	
Q1112	8-729-900-80	TRANSISTOR DTC114ES	
Q1113	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1120	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1123	8-729-029-94	TRANSISTOR DTC143TSA	
Q1124	8-729-029-94	TRANSISTOR DTC143TSA	
Q1201	8-729-119-78	TRANSISTOR 2SC2785-HFE	(AUS,E,E91,EA,MX,SP,MY,TH)
		< RESISTOR >	
R1100	1-249-393-11	CARBON 10 5% 1/4W	F
R1101	1-249-429-11	CARBON 10K 5% 1/4W	
R1102	1-249-429-11	CARBON 10K 5% 1/4W	
R1103	1-249-429-11	CARBON 10K 5% 1/4W	
R1104	1-249-429-11	CARBON 10K 5% 1/4W	
R1105	1-249-429-11	CARBON 10K 5% 1/4W	
R1106	1-249-429-11	CARBON 10K 5% 1/4W	
R1107	1-247-807-31	CARBON 100 5% 1/4W	
R1108	1-247-807-31	CARBON 100 5% 1/4W	
R1109	1-249-429-11	CARBON 10K 5% 1/4W	
R1110	1-249-429-11	CARBON 10K 5% 1/4W	
R1111	1-249-429-11	CARBON 10K 5% 1/4W	
R1112	1-249-410-11	CARBON 270 5% 1/4W	F
R1113	1-249-410-11	CARBON 270 5% 1/4W	F
R1114	1-249-410-11	CARBON 270 5% 1/4W	F
R1115	1-247-807-31	CARBON 100 5% 1/4W	
R1116	1-247-807-31	CARBON 100 5% 1/4W	
R1117	1-247-807-31	CARBON 100 5% 1/4W	
R1118	1-247-807-31	CARBON 100 5% 1/4W	
R1119	1-249-417-11	CARBON 1K 5% 1/4W	F
R1120	1-249-441-11	CARBON 100K 5% 1/4W	
R1121	1-249-409-11	CARBON 220 5% 1/4W	F
R1122	1-249-409-11	CARBON 220 5% 1/4W	F
R1123	1-249-409-11	CARBON 220 5% 1/4W	F
R1124	1-249-409-11	CARBON 220 5% 1/4W	F
R1125	1-249-441-11	CARBON 100K 5% 1/4W	
R1126	1-249-441-11	CARBON 100K 5% 1/4W	
R1127	1-249-441-11	CARBON 100K 5% 1/4W	
R1128	1-249-441-11	CARBON 100K 5% 1/4W	
R1129	1-249-441-11	CARBON 100K 5% 1/4W	
R1130	1-249-407-11	CARBON 150 5% 1/4W	F
R1131	1-249-412-11	CARBON 390 5% 1/4W	F
R1132	1-249-407-11	CARBON 150 5% 1/4W	F
R1133	1-249-407-11	CARBON 150 5% 1/4W	F
R1134	1-249-429-11	CARBON 10K 5% 1/4W	
R1135	1-249-407-11	CARBON 150 5% 1/4W	F
R1136	1-249-407-11	CARBON 150 5% 1/4W	F
R1137	1-249-407-11	CARBON 150 5% 1/4W	F
R1143	1-249-441-11	CARBON 100K 5% 1/4W	
R1144	1-249-441-11	CARBON 100K 5% 1/4W	
R1145	1-249-441-11	CARBON 100K 5% 1/4W	
R1146	1-249-441-11	CARBON 100K 5% 1/4W	
R1147	1-249-441-11	CARBON 100K 5% 1/4W	
R1148	1-249-441-11	CARBON 100K 5% 1/4W	
R1149	1-249-441-11	CARBON 100K 5% 1/4W	
R1155	1-249-413-11	CARBON 470 5% 1/4W	F
R1156	1-249-414-11	CARBON 560 5% 1/4W	F
R1157	1-249-416-11	CARBON 820 5% 1/4W	F
R1158	1-249-417-11	CARBON 1K 5% 1/4W	F
R1159	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R1160	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R1161	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R1162	1-249-422-11	CARBON 2.7K 5% 1/4W	F

PANEL

Ref. No.	Part No.	Description			Remarks
R1163	1-249-424-11	CARBON	3.9K	5%	1/4W F
R1164	1-249-426-11	CARBON	5.6K	5%	1/4W
R1165	1-249-428-11	CARBON	8.2K	5%	1/4W F
R1166	1-249-431-11	CARBON	15K	5%	1/4W
R1167	1-249-413-11	CARBON	470	5%	1/4W F
R1168	1-249-414-11	CARBON	560	5%	1/4W F
R1169	1-249-416-11	CARBON	820	5%	1/4W F
R1170	1-249-417-11	CARBON	1K	5%	1/4W F
R1171	1-249-418-11	CARBON	1.2K	5%	1/4W F
R1172	1-249-413-11	CARBON	470	5%	1/4W F
R1173	1-249-414-11	CARBON	560	5%	1/4W F
R1174	1-249-419-11	CARBON	1.5K	5%	1/4W F
R1175	1-249-416-11	CARBON	820	5%	1/4W F
R1176	1-249-417-11	CARBON	1K	5%	1/4W F
R1177	1-249-418-11	CARBON	1.2K	5%	1/4W F
R1178	1-249-419-11	CARBON	1.5K	5%	1/4W F
R1179	1-249-421-11	CARBON	2.2K	5%	1/4W F
R1180	1-249-422-11	CARBON	2.7K	5%	1/4W F
R1181	1-249-424-11	CARBON	3.9K	5%	1/4W F
R1182	1-249-426-11	CARBON	5.6K	5%	1/4W
R1183	1-249-428-11	CARBON	8.2K	5%	1/4W F
R1184	1-249-431-11	CARBON	15K	5%	1/4W
R1185	1-249-401-11	CARBON	47	5%	1/4W F
R1186	1-249-401-11	CARBON	47	5%	1/4W F
R1189	1-249-441-11	CARBON	100K	5%	1/4W
R1190	1-249-441-11	CARBON	100K	5%	1/4W
R1191	1-260-083-11	CARBON	47	5%	1/2W
R1192	1-260-083-11	CARBON	47	5%	1/2W
R1197	1-249-429-11	CARBON	10K	5%	1/4W
R1198	1-249-441-11	CARBON	100K	5%	1/4W
R1199	1-249-406-11	CARBON	120	5%	1/4W F
R1203	1-249-429-11	CARBON	10K	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1204	1-249-417-11	CARBON	1K	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1205	1-249-441-11	CARBON	100K	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1206	1-249-417-11	CARBON	1K	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1207	1-249-433-11	CARBON	22K	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1208	1-247-807-31	CARBON	100	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1209	1-249-429-11	CARBON	10K	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1210	1-247-883-00	CARBON	150K	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1211	1-247-807-31	CARBON	100	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1212	1-249-417-11	CARBON	1K	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1213	1-249-428-11	CARBON	8.2K	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1214	1-249-431-11	CARBON	15K	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1215	1-249-441-11	CARBON	100K	5%	1/4W (AUS,E,E91,EA,MX,SP,MY,TH)
R1231	1-249-417-11	CARBON	1K	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1280	1-249-417-11	CARBON	1K	5%	1/4W F
R1281	1-249-417-11	CARBON	1K	5%	1/4W F
R1282	1-249-417-11	CARBON	1K	5%	1/4W F
R1283	1-249-417-11	CARBON	1K	5%	1/4W F
R1285	1-249-417-11	CARBON	1K	5%	1/4W F
R1286	1-249-417-11	CARBON	1K	5%	1/4W F
R1287	1-249-417-11	CARBON	1K	5%	1/4W F
R1288	1-249-417-11	CARBON	1K	5%	1/4W F
R1289	1-249-417-11	CARBON	1K	5%	1/4W F
R1290	1-249-417-11	CARBON	1K	5%	1/4W F
R1291	1-249-415-11	CARBON	680	5%	1/4W F
R1292	1-249-419-11	CARBON	1.5K	5%	1/4W F
R1293	1-249-419-11	CARBON	1.5K	5%	1/4W F
R1294	1-249-419-11	CARBON	1.5K	5%	1/4W F
R1295	1-249-419-11	CARBON	1.5K	5%	1/4W F
R1296	1-249-419-11	CARBON	1.5K	5%	1/4W F
R1297	1-249-415-11	CARBON	680	5%	1/4W F

< VARIABLE RESISTOR >

RV1201	1-227-309-11	RES, VAR, CARBON 50K (MIC LEVEL) (AUS,E,E91,EA,MX,SP,MY,TH)

< SWITCH >

S1101	1-418-725-11	ENCODER, ROTARY (12 TYPE) (VOLUME)
S1116	1-762-875-21	SWITCH, KEYBOARD (◀▶)
S1117	1-762-875-21	SWITCH, KEYBOARD (■)
S1118	1-762-875-21	SWITCH, KEYBOARD (❚❚)
S1119	1-762-875-21	SWITCH, KEYBOARD (▶▶❙)
S1120	1-762-875-21	SWITCH, KEYBOARD (❙◀◀)
S1121	1-762-875-21	SWITCH, KEYBOARD (▶▶+)
S1122	1-762-875-21	SWITCH, KEYBOARD (◀◀-)
S1123	1-762-875-21	SWITCH, KEYBOARD (GAME)
S1124	1-762-875-21	SWITCH, KEYBOARD (MD (VIDEO))
S1125	1-762-875-21	SWITCH, KEYBOARD (DIGITAL)
S1126	1-762-875-21	SWITCH, KEYBOARD (TAPE A/B)
S1127	1-762-875-21	SWITCH, KEYBOARD (TUNET/BAND)
S1128	1-762-875-21	SWITCH, KEYBOARD (DVD)
S1129	1-762-875-21	SWITCH, KEYBOARD (PLAY MODE)
S1130	1-762-875-21	SWITCH, KEYBOARD (REPEAT)
S1131	1-762-875-21	SWITCH, KEYBOARD (DVD DISPLAY)
S1132	1-762-875-21	SWITCH, KEYBOARD (TIMER SELECT)
S1133	1-762-875-21	SWITCH, KEYBOARD (CLOCK TIMER SET)
S1134	1-762-875-21	SWITCH, KEYBOARD (SPECTRUM)
S1135	1-762-875-21	SWITCH, KEYBOARD (DISPLAY)
S1136	1-762-875-21	SWITCH, KEYBOARD (TOOL MODE)
S1137	1-762-875-21	SWITCH, KEYBOARD (ENTER)
S1138	1-762-875-21	SWITCH, KEYBOARD (MOVIE MODE)
S1139	1-762-875-21	SWITCH, KEYBOARD (MUSIC MODE)
S1140	1-762-875-21	SWITCH, KEYBOARD (DSP EDIT)
S1141	1-762-875-21	SWITCH, KEYBOARD (GAME MODE)
S1142	1-762-875-21	SWITCH, KEYBOARD (P FILE)
S1143	1-762-875-21	SWITCH, KEYBOARD (GROOVE)
S1144	1-762-875-21	SWITCH, KEYBOARD (EFFECT)
S1145	1-762-875-21	SWITCH, KEYBOARD (2CH/MULTI)
S1146	1-762-875-21	SWITCH, KEYBOARD (REC PAUSE/START)
S1147	1-762-875-21	SWITCH, KEYBOARD (CD SYNC HI-DUB)
S1148	1-762-875-21	SWITCH, KEYBOARD (DVD MENU)
S1149	1-762-875-21	SWITCH, KEYBOARD (DVD TITLE)

< VIBRATOR >

X1101	1-795-054-51	VIBRATOR, CERAMIC (4MHz)

****

Ref. No.	Part No.	Description			Remarks
	A-4726-861-A	RF-240 MOUNTED BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C001	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C002	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C005	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C006	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C007	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C008	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V
C009	1-124-779-00	ELECT CHIP	10uF	20%	16V
C015	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C016	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C017	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C018	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C019	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C021	1-124-779-00	ELECT CHIP	10uF	20%	16V
C022	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C023	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C024	1-115-416-11	CERAMIC CHIP	0.001uF	5%	25V
C025	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C026	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C027	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C028	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C031	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C032	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C033	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C034	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C035	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C036	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C038	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C039	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C040	1-164-217-11	CERAMIC CHIP	150PF	5%	50V
C043	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C044	1-124-779-00	ELECT CHIP	10uF	20%	16V
C046	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C047	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C048	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
		< CONNECTOR >			
CN001	1-766-835-21	CONNECTOR, FFC/FPC (ZIF) 26P			
CN002	1-784-875-21	CONNECTOR,FFC(LIF(NON-ZIF))25P			
CN003	1-784-861-21	CONNECTOR, FFC(LIF(NON-ZIF))9P			
CN004	1-784-861-21	CONNECTOR, FFC(LIF(NON-ZIF))9P			
		< DIODE >			
D001	8-719-988-61	DIODE 1SS355TE-17			
D004	8-719-988-61	DIODE 1SS355TE-17			
		< IC >			
IC001	8-759-828-02	IC SP3728AC			
		< COIL >			
L001	1-412-031-11	INDUCTOR CHIP 47uH			
L002	1-412-031-11	INDUCTOR CHIP 47uH			
		< TRANSISTOR >			
Q001	8-729-903-46	TRANSISTOR 2SB1132-T100-QR			
Q002	8-729-903-46	TRANSISTOR 2SB1132-T100-QR			

Ref. No.	Part No.	Description			Remarks
		< RESISTOR >			
R002	1-216-809-11	METAL CHIP	100	5%	1/16W
R003	1-216-809-11	METAL CHIP	100	5%	1/16W
R005	1-216-845-11	METAL CHIP	100K	5%	1/16W
R006	1-216-838-11	METAL CHIP	27K	5%	1/16W
R007	1-216-803-11	METAL CHIP	33	5%	1/16W
R008	1-216-803-11	METAL CHIP	33	5%	1/16W
R009	1-216-821-11	METAL CHIP	1K	5%	1/16W
R010	1-216-841-11	METAL CHIP	47K	5%	1/16W
R011	1-216-809-11	METAL CHIP	100	5%	1/16W
R020	1-216-803-11	METAL CHIP	33	5%	1/16W
R023	1-216-803-11	METAL CHIP	33	5%	1/16W
R025	1-216-841-11	METAL CHIP	47K	5%	1/16W
R029	1-216-809-11	METAL CHIP	100	5%	1/16W
R037	1-216-834-11	METAL CHIP	12K	5%	1/16W
R038	1-216-861-11	METAL CHIP	2.2M	5%	1/16W
R045	1-216-809-11	METAL CHIP	100	5%	1/16W
**********					
	1-682-792-11	SENSOR BOARD			
		**********			
		< CAPACITOR >			
C712	1-164-159-11	CERAMIC	0.1uF		50V
		< TRANSISTOR >			
Q711	8-729-029-66	TRANSISTOR DTC114ESA			
Q712	8-729-921-53	TRANSISTOR PT483F1			
		< RESISTOR >			
R711	1-249-417-11	CARBON	1K	5%	1/4W F
R712	1-249-417-11	CARBON	1K	5%	1/4W F
R713	1-249-429-11	CARBON	10K	5%	1/4W
R714	1-249-429-11	CARBON	10K	5%	1/4W
		< SWITCH >			
S711	1-771-821-11	SWITCH, PUSH (1 KEY) (BU UP/DOWN)			
**********					
	1-680-190-11	SUB TRANS BOARD			
		**********			
	1-533-217-31	HOLDER, FUSE			
		< CAPACITOR >			
⚠C901	1-113-925-11	CERAMIC	0.01uF	20%	250V
C902	1-126-768-11	ELECT	2200uF	20%	16V
C903	1-126-933-11	ELECT	100uF	20%	16V
C904	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN901	1-564-321-00	PIN, CONNECTOR 2P			
CN902	1-568-106-11	PIN, CONNECTOR 4P (E,EA,SP,MY)			
* CN902	1-564-321-21	PIN, CONNECTOR 2P (AEP,AUS,CND,E91,MX,TH,UK,US)			
CN903	1-785-329-11	PIN, CONNECTOR (LIGHT ANGLE)3P			
		< DIODE >			
⚠D901	8-719-911-19	DIODE 1SS119-25			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

SUB TRANS

Ref. No.	Part No.	Description	Remarks
D902	8-719-024-99	DIODE 11ES2-NTA2B	
D903	8-719-024-99	DIODE 11ES2-NTA2B	
D904	8-719-024-99	DIODE 11ES2-NTA2B	
D905	8-719-024-99	DIODE 11ES2-NTA2B	
		< FUSE >	
⚠F911	1-533-470-11	FUSE, GLASS TUBE (DIA. 5) (T3.15AL 250V)	(E,EA,SP,MY)
⚠F912	1-533-470-11	FUSE, GLASS TUBE (DIA. 5) (T3.15AL 250V)	(E,EA,SP,MY)
⚠F913	1-533-454-11	FUSE, GLASS TUBE (DIA. 5) (6.3A 125V)	(US,CND)
⚠F913	1-533-468-11	FUSE, GLASS TUBE (DIA. 5) (T2AL 250V)	(AEP,UK)
⚠F913	1-533-470-11	FUSE, GLASS TUBE (DIA. 5) (T3.15AL 250V)	(AUS,E91,TH)
⚠F913	1-533-473-11	FUSE, GLASS TUBE (DIA. 5) (T6.3AL 250V)	(E,EA,MX,SP,MY)
		< IC >	
IC901	8-759-158-62	IC TA78057S	
		< TRANSISTOR >	
Q901	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< RESISTOR >	
R902	1-249-429-11	CARBON 10K 5% 1/4W	
R903	1-249-429-11	CARBON 10K 5% 1/4W	
		< RELAY >	
⚠RY901	1-755-276-11	RELAY, POWER	
		< SWITCH >	
⚠S901	1-786-055-21	SELECTOR, VOLTAGE (VOLTAGE SELECTOR)	(E,EA,SP,MY)
		< TRANSFORMER >	
⚠T901	1-435-824-11	TRANSFORMER, POWER (AEP,UK)	
⚠T901	1-435-823-11	TRANSFORMER, POWER (US,CND)	
⚠T901	1-435-825-11	TRANSFORMER, POWER	(AUS,E,E91,EA,MX,SP,MY,TH)
**********			
	A-4727-113-A	SURROUND AMP BOARD, COMPLETE(US,CND)	
	A-4727-137-A	SURROUND AMP BOARD, COMPLETE (AEP,UK)	
	A-4727-157-A	SURROUND AMP BOARD, COMPLETE	(AUS,E91,EA,SP,MY)
	A-4727-197-A	SURROUND AMP BOARD, COMPLETE (E,MX)	
	A-4727-223-A	SURROUND AMP BOARD, COMPLETE (TH)	
	**********		
		< CAPACITOR >	
C931	1-126-964-11	ELECT 10uF 20% 50V	
C932	1-126-917-11	ELECT 3300uF 20% 6.3V	
C933	1-126-964-11	ELECT 10uF 20% 50V	
C934	1-126-935-11	ELECT 470uF 20% 10V	
C935	1-126-964-11	ELECT 10uF 20% 50V	
C936	1-126-917-11	ELECT 3300uF 20% 6.3V	
C937	1-126-964-11	ELECT 10uF 20% 50V	
C938	1-126-935-11	ELECT 470uF 20% 10V	
C1001	1-126-964-11	ELECT 10uF 20% 50V	
C1002	1-162-286-31	CERAMIC 220PF 10% 50V	

SURROUND AMP

Ref. No.	Part No.	Description	Remarks
C1003	1-162-286-31	CERAMIC 220PF 10% 50V	
C1004	1-126-947-11	ELECT 47uF 20% 10V	
C1006	1-136-165-00	FILM 0.1uF 5% 50V	
C1007	1-136-165-00	FILM 0.1uF 5% 50V	
C1008	1-126-968-11	ELECT 100uF 20% 50V	
C1041	1-126-964-11	ELECT 10uF 20% 50V	
C1042	1-162-286-31	CERAMIC 220PF 10% 50V	
C1043	1-162-286-31	CERAMIC 220PF 10% 50V	
C1044	1-126-947-11	ELECT 47uF 20% 10V	
C1046	1-136-165-00	FILM 0.1uF 5% 50V	
C1047	1-136-165-00	FILM 0.1uF 5% 50V	
C1051	1-126-964-11	ELECT 10uF 20% 50V	
C1052	1-162-286-31	CERAMIC 220PF 10% 50V	
C1053	1-162-286-31	CERAMIC 220PF 10% 50V	
C1054	1-126-947-11	ELECT 47uF 20% 10V	
C1056	1-136-165-00	FILM 0.1uF 5% 50V	
C1057	1-136-165-00	FILM 0.1uF 5% 50V	
C1058	1-126-968-11	ELECT 100uF 20% 50V	
C1071	1-136-153-00	FILM 0.01uF 5% 50V	
C1072	1-136-153-00	FILM 0.01uF 5% 50V	
C1073	1-137-844-11	ELECT 2200uF 20% 42V	
C1074	1-137-844-11	ELECT 2200uF 20% 42V	
C1081	1-136-165-00	FILM 0.1uF 5% 50V	
C1082	1-136-165-00	FILM 0.1uF 5% 50V	
C1083	1-136-165-00	FILM 0.1uF 5% 50V	
C1084	1-136-165-00	FILM 0.1uF 5% 50V	
C1085	1-136-165-00	FILM 0.1uF 5% 50V	
C1086	1-136-165-00	FILM 0.1uF 5% 50V	
		< CONNECTOR >	
CN1001	1-573-829-11	CONNECTOR, BOARD TO BOARD 15P	
		< DIODE >	
D933	8-719-050-84	DIODE RB441Q-40T-77	
D934	8-719-050-84	DIODE RB441Q-40T-77	
D1001	8-719-911-19	DIODE 1SS119-25	
D1041	8-719-911-19	DIODE 1SS119-25	
D1051	8-719-911-19	DIODE 1SS119-25	
D1071	8-719-510-68	DIODE D5SBA204101	
D1081	8-719-911-19	DIODE 1SS119-25	
D1082	8-719-911-19	DIODE 1SS119-25	
D1091	8-719-911-19	DIODE 1SS119-25	
		< IC >	
IC931	8-759-039-69	IC UPC7805AHF	
IC932	8-759-158-62	IC TA78057S	
IC933	8-759-445-59	IC BA033T	
IC934	8-759-445-59	IC BA033T	
IC1001	8-749-017-19	IC STK443-050	
		< COIL >	
L1081	1-420-872-00	COIL, AIR-CORE	
L1082	1-420-872-00	COIL, AIR-CORE	
L1083	1-420-872-00	COIL, AIR-CORE	
		< TRANSISTOR >	
Q931	8-729-030-19	TRANSISTOR 2SB1640	
Q932	8-729-900-80	TRANSISTOR DTC114ES	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

SURROUND AMP

TRANS

Ref. No.	Part No.	Description			Remarks
Q1001	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q1016	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q1017	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q1041	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q1051	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
Q1081	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q1083	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q1084	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA			
		< RESISTOR >			
R931	1-249-422-11	CARBON	2.7K	5%	1/4W F
R932	1-249-422-11	CARBON	2.7K	5%	1/4W F
R933	1-249-422-11	CARBON	2.7K	5%	1/4W F
R934	1-249-429-11	CARBON	10K	5%	1/4W
R1001	1-249-417-11	CARBON	1K	5%	1/4W F
R1002	1-249-438-11	CARBON	56K	5%	1/4W
R1003	1-249-418-11	CARBON	1.2K	5%	1/4W F (AEP,UK)
R1003	1-249-417-11	CARBON	1K	5%	1/4W F (US,CND)
R1003	1-249-416-11	CARBON	820	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1004	1-249-438-11	CARBON	56K	5%	1/4W
⚠R1005	1-220-755-11	METAL	0.22	10%	2W
⚠R1006	1-220-755-11	METAL	0.22	10%	2W
R1007	1-249-417-11	CARBON	1K	5%	1/4W F
R1008	1-249-431-11	CARBON	15K	5%	1/4W
R1009	1-249-441-11	CARBON	100K	5%	1/4W
R1010	1-260-076-11	CARBON	10	5%	1/2W
⚠R1011	1-212-881-11	FUSIBLE	100	5%	1/4W
R1015	1-249-433-11	CARBON	22K	5%	1/4W
R1016	1-249-441-11	CARBON	100K	5%	1/4W
R1017	1-249-441-11	CARBON	100K	5%	1/4W
R1018	1-249-437-11	CARBON	47K	5%	1/4W
R1019	1-249-429-11	CARBON	10K	5%	1/4W
⚠R1020	1-202-972-61	FUSIBLE	1	5%	1/4W
R1031	1-249-437-11	CARBON	47K	5%	1/4W
R1032	1-249-438-11	CARBON	56K	5%	1/4W
R1033	1-249-439-11	CARBON	68K	5%	1/4W
R1041	1-249-417-11	CARBON	1K	5%	1/4W F
R1042	1-249-438-11	CARBON	56K	5%	1/4W
R1043	1-249-419-11	CARBON	1.5K	5%	1/4W F (AEP,U)
R1043	1-249-418-11	CARBON	1.2K	5%	1/4W F (US,CND)
R1043	1-249-417-11	CARBON	1K	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1044	1-249-438-11	CARBON	56K	5%	1/4W
⚠R1045	1-220-755-11	METAL	0.22	10%	2W
⚠R1046	1-220-755-11	METAL	0.22	10%	2W
R1047	1-249-417-11	CARBON	1K	5%	1/4W F
R1048	1-249-431-11	CARBON	15K	5%	1/4W
R1049	1-249-441-11	CARBON	100K	5%	1/4W
R1050	1-260-076-11	CARBON	10	5%	1/2W
R1051	1-249-417-11	CARBON	1K	5%	1/4W F
R1052	1-249-438-11	CARBON	56K	5%	1/4W
R1053	1-249-418-11	CARBON	1.2K	5%	1/4W F (AEP,UK)
R1053	1-249-417-11	CARBON	1K	5%	1/4W F (US,CND)
R1053	1-249-416-11	CARBON	820	5%	1/4W F (AUS,E,E91,EA,MX,SP,MY,TH)
R1054	1-249-438-11	CARBON	56K	5%	1/4W

Ref. No.	Part No.	Description			Remarks
⚠R1055	1-220-755-11	METAL	0.22	10%	2W
⚠R1056	1-220-755-11	METAL	0.22	10%	2W
R1057	1-249-417-11	CARBON	1K	5%	1/4W F
R1058	1-249-431-11	CARBON	15K	5%	1/4W
R1059	1-249-441-11	CARBON	100K	5%	1/4W
R1060	1-260-076-11	CARBON	10	5%	1/2W
⚠R1061	1-212-881-11	FUSIBLE	100	5%	1/4W
R1071	1-249-441-11	CARBON	100K	5%	1/4W
R1072	1-249-441-11	CARBON	100K	5%	1/4W
R1081	1-260-076-11	CARBON	10	5%	1/2W
R1082	1-260-076-11	CARBON	10	5%	1/2W
R1083	1-260-076-11	CARBON	10	5%	1/2W
R1084	1-260-076-11	CARBON	10	5%	1/2W
R1085	1-260-076-11	CARBON	10	5%	1/2W
R1086	1-260-076-11	CARBON	10	5%	1/2W
R1087	1-249-437-11	CARBON	47K	5%	1/4W
R1088	1-249-437-11	CARBON	47K	5%	1/4W
R1089	1-249-437-11	CARBON	47K	5%	1/4W
R1090	1-249-429-11	CARBON	10K	5%	1/4W
⚠R1094	1-215-888-00	METAL OXIDE	220	5%	2W (US,CND,AEP,UK)
⚠R1094	1-215-889-00	METAL OXIDE	330	5%	2W (AUS,E,E91,EA,MX,SP,MY,TH)
R1095	1-249-429-11	CARBON	10K	5%	1/4W
R1096	1-249-433-11	CARBON	22K	5%	1/4W
R1097	1-249-429-11	CARBON	10K	5%	1/4W
R1098	1-249-441-11	CARBON	100K	5%	1/4W
⚠R1099	1-215-888-00	METAL OXIDE	220	5%	2W (US,CND,AEP,UK)
⚠R1099	1-215-889-00	METAL OXIDE	330	5%	2W (AUS,E,E91,EA,MX,SP,MY,TH)
		< RELAY >			
RY1081	1-515-920-11	RELAY			
RY1082	1-515-920-11	RELAY			
		< THERMISTOR >			
TH1001	1-807-796-11	THERMISTOR			
		< TERMINAL >			
TM1001	1-694-674-22	TERMINAL BOARD (6P)			(REAR/CENTER SPEAKER)
**********					
	1-680-189-11	TRANS BOARD **********			
	1-533-217-31	HOLDER, FUSE			
		< CAPACITOR >			
C911	1-128-576-11	ELECT	100uF	20%	63V
C912	1-126-960-11	ELECT	1uF	20%	50V
C913	1-126-968-11	ELECT	100uF	20%	50V
C915	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN913	1-564-518-11	PLUG, CONNECTOR 3P			
* CN914	1-564-525-11	PLUG, CONNECTOR 10P			
* CN915	1-564-519-11	PLUG, CONNECTOR 4P			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

TRANS **VIDEO**

Ref. No.	Part No.	Description	Remarks
		< DIODE >	
D911	8-719-024-99	DIODE 11ES2-NTA2B	
D912	8-719-983-88	DIODE MTZJ-T-72-33C	
D913	8-719-118-56	DIODE RD4.7F-T7B1	
		< FUSE >	
⚠F916	1-533-473-11	FUSE, GLASS TUBE (DIA. 5) (T6.3AL 250V)	(EXCEPT US,CND)
⚠F916	1-576-537-11	FUSE, GLASS TUBE (DIA. 5) (8A 125V)	(US,CND)
⚠F917	1-533-473-11	FUSE, GLASS TUBE (DIA. 5) (T6.3AL 250V)	(EXCEPT US,CND)
⚠F917	1-576-537-11	FUSE, GLASS TUBE (DIA. 5) (8A 125V)	(US,CND)
⚠F918	1-533-472-11	FUSE, GLASS TUBE (DIA. 5) (T5AL 250V)	(EXCEPT US,CND)
⚠F918	1-576-537-11	FUSE, GLASS TUBE (DIA. 5) (8A 125V)	(US,CND)
⚠F919	1-533-472-11	FUSE, GLASS TUBE (DIA. 5) (T5AL 250V)	(EXCEPT US,CND)
⚠F919	1-576-537-11	FUSE, GLASS TUBE (DIA. 5) (8A 125V)	(US,CND)
		< TRANSISTOR >	
Q971	8-729-048-52	TRANSISTOR 2SA1932(TP)	
		< RESISTOR >	
⚠R911	1-217-637-00	FUSIBLE 1 5% 1/4W	(AEP,UK)
⚠R911	1-219-124-11	FUSIBLE 0.68 5% 1/4W	(EXCEPT AEP,UK)
R913	1-249-429-11	CARBON 10K 5% 1/4W	
R914	1-249-429-11	CARBON 10K 5% 1/4W	
R915	1-247-807-31	CARBON 100 5% 1/4W	
R916	1-247-807-31	CARBON 100 5% 1/4W	
⚠R918	1-219-237-91	SOLID 3.3M 20% 1/2W	(US,CND)
		< TRANSFORMER >	
⚠T911	1-437-510-11	TRANSFORMER, POWER (US,CND)	
⚠T911	1-437-511-11	TRANSFORMER, POWER (AEP,UK)	
⚠T911	1-437-512-11	TRANSFORMER, POWER	(AUS,E,E91,EA,MX,SP,MY,TH)
**********			
	1-682-902-11	VIDEO BOARD **********	
		< CONNECTOR >	
CN601	1-779-274-11	CONNECTOR, FFC(LIF(NON-ZIF))6P	
		< DIODE >	
D601	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D602	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D603	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D604	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D605	8-719-056-83	DIODE UDZ-TE-17-6.8B	
D606	8-719-056-83	DIODE UDZ-TE-17-6.8B	
		< JACK >	
J601	1-774-227-11	JACK, PIN 1P (VIDEO OUT)	
J602	1-537-943-11	TERMINAL, S (S VIDEO OUT)	
**********			

Ref. No.	Part No.	Description	Remarks
		MISCELLANEOUS **********	
14	1-823-367-11	WIRE (FLAT TYPE) (9 CORE)	
15	1-823-370-11	WIRE (FLAT TYPE) (6 CORE)	
16	1-823-368-11	WIRE (FLAT TYPE) (25 CORE)	
68	1-796-001-11	TOUCH PAD	
102	1-773-042-11	WIRE (FLAT TYPE) (17 CORE)	
103	1-757-419-11	WIRE (FLAT TYPE) (21 CORE)	
104	1-757-420-11	WIRE (FLAT TYPE) (23 CORE)	
105	1-823-369-11	WIRE (FLAT TYPE) (12 CORE)	
⚠110	1-777-071-81	CORD, POWER (AEP,E91,EA,SP,MY,UK)	
⚠110	1-783-203-11	CORD, POWER (AUS)	
⚠110	1-783-531-31	CORD, POWER (US,CND)	
⚠110	1-791-901-11	CORD, POWER (E,MX,TH)	
⚠111	1-569-008-21	ADAPTOR, CONVERSION (EA,SP,MY)	
⚠112	1-770-019-11	ADAPTOR, CONVERSION PLUG 3P (UK)	
155	1-454-887-32	SOLENOID, PLUNGER	
161	X-3378-241-1	MOTOR ASSY	
209	X-3378-241-1	MOTOR ASSY	
259	1-791-983-12	WIRE (FLAT TYPE) (8 CORE)	
⚠277	8-820-144-06	OPTICAL PICK-UP KHM-240AAA (TYPE A)	
⚠277	A-6062-709-A	SERVICE ASSY, KHM-270AAA (TYPE B)	
283	1-823-621-11	CABLE, FLEXIBLE FLAT (26 CORE)	
284	1-823-622-11	WIRE (FLAT TYPE) (9 CORE)	
FL1101	1-518-722-11	INDICATOR TUBE, FLUORESCENT	
M721	A-4672-826-A	MOTOR ASSY	
M961	1-763-072-11	FAN, DC	
⚠T911	1-437-510-11	TRANSFORMER, POWER (US,CND)	
⚠T911	1-437-511-11	TRANSFORMER, POWER (AEP,UK)	
⚠T911	1-437-512-11	TRANSFORMER, POWER	(AUS,E,E91,EA,MX,SP,MY,TH)
**********			
		********** HARDWARE LIST **********	
#1	7-685-646-79	SCREW +BVTP 3X8 TYPE2 IT-3	
#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 IT-3	
#3	7-685-105-19	TPG +P 2X8, TYPE 2, NON-SLIT	
#4	7-685-881-09	SCREW +BVTT 4X8 (S)	
#5	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
#6	7-685-872-09	SCREW +BVTT 3X8 (S)	
#7	7-623-921-01	RING, RETAINING, CAPSTAN	
#8	7-628-254-05	SCREW +PS 2.6X5	
#9	7-685-781-09	SCREW +PTT 2X4 (S)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

HCD-DP1000D

SONY

SERVICE MANUAL

Ver 1.5 2002.10

US Model
Canadian Model
AEP Model
UK Model
E Model
Australian Model

SUPPLEMENT-1

File this supplement with the service manual.

Subject: 1. DVD test Mode

9-873-314-81

1. TEST MODE

1-1. GENERAL DESCRIPTION

The Test Mode allows you to make diagnosis and adjustment easily using the remote commander and monitor TV. The instructions, diagnostic results, etc. are given on the on-screen display (OSD).

1-2. STARTING TEST MODE

Press the [I/⏻] button to turn the set ON, and set the function to DVD. Press the [⏏ 1] button to insert the DVD disc, and wait for TOC reading is finish. Next, while pushing the [■] button and the [ENTER] and [DISC 1] button on the main unit at the same time, turn the regulator to the right to start Test Mode and display the menu shown below on the TV screen. At the bottom of the menu screen, the model name and revision number are displayed.
To execute each function, select the desired menu and press its number on the remote commander. To exit from Test Mode, press the [I/⏻] button.

Note: In the Test Mode, use the remote commander (RM-SD170) (Part No.: 1-418-911-11).

```
Test Mode Menu

0. Syscon Diagnosis
1. Drive Auto Adjustment
2. Drive Manual Operation
3. Mecha Aging
4. Emergency History
5. Version Information
6. Video Level Adjustment
                Exit: Power Key
_
Model    : HCX-984_xxxx
Revision: 1.xxx
```

1-3. SYSCON DIAGNOSIS

The same contents as board detail check by serial interface can be checked from the remote commander.
On the Test Mode Menu screen, press [10/0] key on the remote commander, and the following Check Menu will be displayed.

```
    ### Syscon Diagnosis ###
          Check Menu
0. Quit
1. All
2. Version
3. Peripheral
4. Servo
5. Supply
6. AV Decoder
7. Video
8. Audio
_
```

0. Quit

Quit the Syscon Diagnosis and return to the Test Mode Menu.

1. All

All items continuous check
This menu checks all diagnostic items continuously. Normally, all items are checked successively one after another automatically unless an error is found, but at a certain item that requires judgment through a visual check to the result, the following screen is displayed for the key entry.

```
    ### Syscon Diagnosis ###

         Diag All Check
          No. 2 Version

 2-3. ROM Check Sum
Check Sum = 2005



Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

For the ROM Check, the check sum calculated by the Syscon is output, and therefore you must compare it with the specified value for confirmation.
Following the message, press [NEXT] key to go to the next item, or [PREV] key to repeat the same check again. To quit the diagnosis and return to the Check Menu screen, press the [■] or [ENTER] key. If an error occurred, the diagnosis is suspended and the error code is displayed as shown below.

```
    ### Syscon Diagnosis ###




 3-3. EEPROM Check
Error 03: EEPROM Write/Reed N
Address    : 00000001
Write Data : 2492
Read Data  : 2490
Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

Press the [■] key to quit the diagnosis, or [PREV] key to repeat the same item where an error occurred, or [NEXT] key to continue the check from the item next to faulty item.

Selecting 2 and subsequent items calls the submenu screen of each item.
For example, if “5. Supply” is selected, the following submenu will be displayed.

```
    ### Syscon Diagnosis ###
          Check Menu
         No. 5 Supply
0. Quit
1. All
2. ARP Register Check
3. ARP to RAM Data Bus
4. ARP to RAM Address Bus
5. ARP RAM Check
_
```

0. Quit

Quit the submenu and return to the Check Menu.

1. All

All submenu items continuous check
This menu checks 2 and subsequent items successively. At the item where visual check is required for judgment or an error occurred, the checking is suspended and the message is output for key entry. Normally, all items are checked successively one after another automatically unless an error is found.

Selecting 2 and subsequent items executes respective menus and outputs the results.
For the contents of each submenu, see “Check Items List”.

General Description of Checking Method

2. Version

(2-2) Revision
ROM revision number is displayed.
Error: Not detected.
The revision number defined in the source file of ROM (IC206) is displayed with four digits.

(2-3) ROM Check Sum
Check sum is calculated.
Error: Not detected.
The 8-bit data are added at addresses 0x000F0000 ~ 0x002EFFFF of ROM (IC206) and the result is displayed with 4-digit hexadecimal number. Error is not detected. Compare the result with the specified value.

(2-4) Model Type
Model code is displayed.
Error: Not detected.
The model code read from EEPROM (IC201) is displayed with 2-digit hexadecimal number.

Model	Model No.
US and Canadian models	20
E, Mexican and Argentine models	22
AEP, UK and Saudi Arabia models	23
Australian model	24
Malaysia, Singapore, Hong Kong, Thai and Taiwan models	25
Chinese model	26

(2-5) Region
Region code is displayed.
Error: Not detected.
The region code determined from the model code is displayed.

3. Peripheral

(3-2) Gate Array Check
Data write → read, and accord check
Error 02: Gate array write/read discord
Data 0x00~0xFF are written to the address 0xF of gate array (IC601), then read and checked if they accord.

(3-3) EEPROM Check
Data write → read, and accord check
Error 03: EEPROM write/read discord
Data 0x9249, 0x2942, 0x4294 are written to addresses 0x00~0xFF of EEPROM (IC201), then read and checked. Before writing, the data are saved, then after checking, they are written to restore the contents of EEPROM.

4. Servo

(4-2) Servo DSP Check
Data write → read, and accord check
Error 12: Read data discord
Data 0x9249, 0x2942, 0x4294 are written to the address 0x602 of RAM in the Servo DSP (IC701), then read and checked.

(4-3) DSP Driver Test
Test signal data → DSP Driver
Error: Not detected.
Caution: Do not conduct this test with a mechanical deck connected.
The maximum voltage is applied to the Servo Driver IC (IC801, IC802). If mechanical deck is connected, the motor and optics could be damaged. Disconnect mechanical deck following the output message, then enter specified 4- or 5-digit number from the remote commander, and press the ENTER. The test is conducted only when the input data accord. Check the output level, then press the NEXT to finish the test.
This test is skipped if “All” is selected.

Supplement: How to disconnect mechanical deck
Disconnect flat cables connected to the CN002 and CN003 of MB board. Also, disconnect harness from the CN013 of MB board.

5. Supply

Caution: Do not conduct this check with a mechanical deck connected.
An access is made to the stream supply and servo control IC (IC303) and external RAM (IC304) using check data. If mechanical deck is connected, the motor and optics could be damaged. This check is also executed by the “All” menu item.

Supplement: How to disconnect mechanical deck
Disconnect flat cables connected to the CN002 and CN003 of MB board. Also, disconnect harness from the CN013 of MB board.

(5-2) ARP Register Check
Data write → read, and accord check
Error 08: ARP register write, and read data discord
Data 0x00 to 0xFF are written to the TMAX register (address 0xC6) in ARP (IC303), then they are read and checked.

(5-3) ARP to RAM Data Bus
Data write → read, and accord check
Error 09: ARP ←→ RAM data bus error
Data 0x0001 to 0x8000 where one bit each is set to 1 are written to the address 0 of RAM (IC304) connected to the ARP (IC303) through the bus, then they are read and checked. In case of discord, written bit pattern and read data are displayed. If data where multiple bits are 1 are read, the bits concerned may touch each other. Further, if data where certain bit is always 1 or 0 regardless of written data, the line could be disconnected or shorted.

(5-4) ARP to RAM Address Bus
Data write → other address read discord check
Error 10: ARP → RAM address bus error
Caution: Address and data display in case of an error is different from the display of other diagnosis (described later).
Before starting the test, all addresses of RAM (IC304) are cleared to 0x0000.
First, 0xA55A is written to the address 0x00000, and the address data are read and checked from addresses 0x00001 to 0x80000 while shifting 1 bit each. Next, the data at that address is cleared, and it is written to the address 0x00001, and read and checked in the same manner. This check is repeated up to the address 0x80000 while shifting the address data by 1 bit each.
If data other than 0 is read at the addresses except written address, an error is given because all addresses were already cleared to 0. In this check, the error display pattern is different from that of other diagnosis; read data, written address, and read address are displayed in this order. However, the message uses same template, and accordingly exchange Address and Data when reading. The following display, for example,

```
    ### Syscon Diagnosis ###




 5-4. ARP to RAM Address Bus
Error 10: ARP - RAM Address B
Address    : 0000A55A
Write Data : 00000000
Read Data  : 00080000
Press NEXT Key to Continue
Press PREV Key to Repeat
_
```

shows the data 0xA55A was read from address 0x00080000 though it was written to the address 0x00000000. This implies that these addresses are in the form of shadow. Also, if the read data is not 0xA55A, another error will be present.

(5-5) ARP RAM Check
Data write → read, and accord check
Error 11: ARP RAM read data discord
The program code data stored in ROM are copied to all areas of RAM (IC304) connected to the ARP (IC303) through the bus, then they are read and checked if they accord. If the detail check was selected initially, the data are written to all areas and read, then the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 11, and the test is suspended.

6. AV Decoder

(6-2) 1930 RAM
Data write → read, and accord check
Error 13: AVD RAM read data discord
The program code data stored in ROM (IC206) are copied to all areas of RAM (IC402, IC403) connected to the AVD (IC401) through the bus, then they are read and checked if they accord. Further, the same test is conducted once again with the data where all bits are inverted between 1 and 0. If discord is detected, faulty address, written data, and read data are displayed following the error code 13, and the test is suspended.

(6-3) 1930 SP
ROM → AVD RAM → Video OUT
Error: Not detected.
The data including sub picture streams in ROM (IC206) are transferred to the RAM (IC402, IC403) in AVD (IC401), and output as video signals from the AVD (IC401).
They are output from all video terminals (Composite, Y/C).

7. Video

(7-2) Color Bar
AVD color bar command write → Video OUT
Error: Not detected.
The command is transferred to the AVD, and the color bar signals are output from video terminals.
They are output from all video terminals (Composite, Y/C).

8. Audio

(8-2) ARP → 1930
Error 14: ARP → 1930 video NG
15 : ARP → 1930 audio NG

Check Items List

2) Version
(2-2) Revision
(2-3) ROM Check Sum
(2-4) Model Type
(2-5) Region

3) Peripheral
(3-2) Gate Array Check
(3-3) EEPROM Check

4) Servo
(4-2) Servo DSP Check
(4-3) DSP Driver Test

5) Supply
(5-2) ARP Register Check
(5-3) ARP to RAM Data Bus
(5-4) ARP to RAM Address Bus
(5-5) ARP RAM Check

6) AV Decoder
(6-2) 1930 RAM
(6-3) 1930 SP

7) Video
(7-2) Color Bar

8) Audio
(8-2) ARP → 1930
(8-3) Test Tone

Error Codes List
00: Error not detected
01: RAM write/read data discord
02: Gate array NG
03: EEPROM NG
08: ARP register read data discord
09: ARP ←→ RAM data bus error
10: ARP ←→ RAM address bus error
11: ARP RAM read data discord
12: Servo DSP NG
13: 1930 SDRAM NG
14: ARP → 1930 video NG
15: ARP → 1930 audio NG
16: 1910 UCODE download NG
17: System call error (function not supported)
18: System call error (parameter error)
19: System call error (illegal ID number)
20: System call error (time out)
90: Error occurred
91: User verification NG
92: Diagnosis cancelled

1-4. DRIVE AUTO ADJUSTMENT

On the Test Mode Menu screen, press [1] key on the remote commander, and the Adjustment Menu will be displayed.

```
   ## Drive Auto Adjustment ##

         Adjustment Menu

0. ALL
1. DVD-SL
2. CD
3. DVD-DL
4. SACD



                    Exit: RETURN
```

Normally, [10/0] is selected to adjust DVD (single layer), CD, DVD (dual layer), and SACD in this order. But, individual items can be adjusted for the case where adjustment is suspended due to an error. In this mode, the adjustment can be made easily through the operation following the message displayed on the screen.
The disc used for adjustment must be the one specified for adjustment. However, for SACD disc, use the player with initial data if the disc is not available.

0. ALL

Select [10/0] and press [ENTER] key, and the servo set data in EEPROM will be initialized. Then, 1. DVD-SL disc, 2. CD disc, 3. DVD-DL disc, and 4. SACD disc are adjusted in this order. Each time one disc was adjusted, it is ejected. Replace it with the specified disc following the message. Though the message to confirm whether discs other than SACD disc are adjusted is not displayed, you can finish the adjustment if pressing the [■] button. During adjustment of each disc, the measurement for disc type judgment is made. As automatic adjustment does not judge the disc type unlike conventional models, take care not to insert wrong type discs. Also, do not give a shock during adjustment.

1. DVD-SL (single layer)

Select [1], insert DVD single layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

DVD Single Layer Disc Adjustment Steps

1. SLED TILT Reset
2. Disc Check Memory SL
3. Wait 300 msec
4. Set Disc Type SL
5. LD ON
6. Spdl Start
7. Wait 1 sec
8. Focus Servo ON 0
9. Auto Track Offset Adjust
10. CLVA ON
11. Wait 500 msec
12. Tracking ON
13. Wait 1 sec
14. Sled ON
15. Check CLV Lock
16. Auto LFO Adjust
17. Auto Focus Offset Adjust
18. Auto Tilt Position Adjust
19. Auto Focus Gain Adjust
20. Auto Focus Offset Adjust
21. EQ Boost Adjust
22. Auto LFO Adjust
23. Auto Track Gain Adjust

Search Check

24. 32Tj Fwd
25. 32Tj Rev
26. 500Tj Fwd
27. 500Tj Rev

28. All Servo Stop
29. Eep Copy Loop Filter Offset

2. CD

Select [2], insert CD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

CD Adjustment Steps

1. Sled Tilt Rest
2. Disc Check Memory CD
3. Wait 500 msec
4. Set Disc Type CD
5. LD ON
6. Spdl Start
7. Wait 500 msec
8. Focus Servo ON 0
9. Auto Track Offset Adjust

10. CLVA ON
11. Wait 500 msec
12. Tracking ON
13. (TC Display Start)
14. Wait 1 sec
15. Jitter Display Start
16. Sled ON
17. Check CLV ON
18. Auto LFO Adjust
19. Auto Focus Offset Adjust
20. Auto Focus Gain Adjust
21. Auto Focus Offset Adjust
22. Eq Boost Adjust
23. Auto LFO Adjust
24. Auto Track Gain Adjust

Search Check

25. 32Tj Fwd
26. 32Tj Rev
27. 500Tj Fwd
28. 500Tj Rev

29. All Servo Stop

3. DVD-DL (dual layer)

Select [3], insert DVD dual layer disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM.

DVD Dual Layer Disc Adjustment Steps

1. Sled Tilt Reset
2. Disc Check Memory DL
3. Wait 500 msec
4. Set Disc Type DL
5. LD ON
6. Spdl Start
7. Wait 1 sec, Layer 1 Adjust
8. Focus Servo ON 0
9. Auto Track Offset Adjust

10. Clva ON
11. Wait 500 msec
12. Tracking ON
13. Wait 500 msec
14. Sled ON
15. Check CLV Lock
16. Auto Loop Filter Offset Auto Focus Adjust
17. Auto Focus Gain Adjust
18. Auto Focus Offset Adjust
19. Eq Boost Adjust
20. Auto Loop Filter Offset
21. Auto Track Gain Adjust

Search Check

22. 32Tj Fwd
23. 32Tj Rev
24. 500Tj Fwd
25. 500Tj Rev

Layer 0 Adjust

26. Fj (L1 -> L0)
27. Auto Track Offset Adjust L0

28. Clva ON
29. Wait 500 msec
30. Tracking ON
31. Wait 500 msec
32. Sled ON
33. Check CLV Lock
34. Auto Focus Filter Offset
35. Auto Focus Adjust
36. Auto Focus Gain Adjust
37. Auto Focus Offset Adjust
38. Eq Boost Adjust
39. Auto Loop Filter Offset
40. Auto Track Gain Adjust

Search Check

41. 32Tj Fwd
42. 32Tj Rev
43. 500Tj fwd
44. 500Tj Rev

Layer Jump Check

45. Lj (L0 -> L1)
46. Lj (L1 -> L0)

47. All Servo Stop

4. SACD

Select [4], insert SACD disc, and press [ENTER] key, and the adjustment will be made through the following steps, then adjusted values will be written to the EEPROM. However, if SACD disc is not available, use the player with initial data, skipping the SACD adjustment. In this case, you can finish the adjustment if pressing the [■] button.

SACD Adjustment Steps

1. Sled Tilt Reset
2. Set Disc Type CD
3. LD ON
4. Spdl Start
5. Wait 500 msec
6. Focus Servo ON 0
7. Auto track Offset Adjust
8. CLVA ON
9. Wait 500 msec
10. Tracking ON
11. Wait 1 sec
12. Sled ON
13. Check CLV ON
14. Auto Focus Offset Adjust
15. Auto Focus Gain Adjust
16. Auto Focus Offset Adjust
17. Eq Boost Adjust
18. Auto LFO Adjust
19. Auto Track Gain Adjust

20. 32Tj Fwd
21. 32Tj Rev
22. 500Tj Fwd
23. 500Tj Rev

24. All Servo Stop

1-5. DRIVE MANUAL OPERATION

On the Test Mode Menu screen, select [2], and the Operation Menu will be displayed. For the manual operation, each servo on/off control and adjustment can be executed manually.

```
  ## Drive Manual Operation ##

         Operation Menu
1. Disc type
2. Servo Control
3. Track/Layer Jump
4. Manual Adjustment
5. Auto Adjustment
6. Memory Check

0. Disc Check Memory

                  Exit: Return
```

In using the manual operation menu, take care of the following points. These commands do not provide protection, thus requiring correct operation. The sector address or time code field is displayed when a disc is loaded.

1. Set correctly the disc type to be used on the Disc Type screen.
   The disc type must be set after a disc was loaded.
   The set disc type is cleared when the tray is opened.
2. After power ON, if the Drive Manual Operation was selected, first perform "Reset SLED TILT" by opening 1. Disc Type screen.
3. In case of an alarm, immediately press the [■] button to stop the servo operation, and press the [I/⏻] button to turn the power OFF.

Basic operation (controllable from front panel or remote commander)

[I/⏻]	Power OFF (release the Test Mode)
[■]	Servo stop
[⏏]	Stop+Eject/Loading
[RETURN]	Return to Operation Menu or Test Mode Menu
[NEXT], [PREV]	Transition between sub modes of menu
[1] to [9], [10/0]	Selection of menu items
Cursor UP/DOWN	Increase/Decrease in manually adjusted value

0. Disc Check Memory

```
            Disc Check



1. SL Disc Check
2. CD Disc Check
3. DL Disc Check



0. Reset SLED TILT
```

On this screen, the mirror time is measured to judge the disc and it is written to the EEPROM. First load DVD SL disc and press [1], next load CD disc and press [2], and finally load DVD DL disc and press [3].
The adjustment must be executed more than once after default data were written. External vibration or shock to the player must not be given. Reference value for DVD is from 10 to 20, and for CD, from 28 to 4F.
Check that the value of CD is larger than that of DVD.
When those values are beyond a range perform this adjustment again.
From this screen, you can go to another mode by pressing [NEXT] or [PREV] key, but you cannot enter this mode from another mode. You can enter this mode from the Operation Menu screen only.

1. Disc Type

```
          Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. dvd SL   8 cm
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
                        EMG. 00
```

On this screen, select the disc type. To select the disc type, press the number of the loaded disc. The selected disc type is displayed at the bottom. Selecting [1] automatically selects and displays the disc type. In case of wrong display, retry "Disc Check Memory". Also, opening the tray causes the set disc type to be cleared. In this case, set the disc type again after loading.
In performing manual operation, the disc type must be set.
Once the disc type has been selected, the sector address or time code display field will appear as shown below. These values are displayed when PLL is locked.

```
          Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. dvd SL   8 cm
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
       SA._____ SI.___ EMG. 00
DVD SL 12 cm
```

Display when DVD SL 12cm disc was selected

```
          Disc Type
1. Disc Type Auto Check
2. DVD SL   12 cm
3. DVD DL   12 cm
4. CD       12cm
5. SACD     12 cm
6. dvd SL   8 cm
7. DVD DL   8 cm
8. CD       8 cm
9. SACD     8 cm
0. Reset SLED TILT
        TC.___:___:___ EMG. 00
CD   12 cm
```

Display when CD 12cm disc was selected

[10/0] Reset SLED TILT — Reset the Sled and Tilt to initial position.

[1] Disk Type Check — Judge automatically the loaded disc. As the judged result is displayed at the bottom of screen, make sure that it is correct.
If Disc Check Memory Menu has not been executed after EEPROM default setting, the disc type cannot be judged. In this case, return to the initial menu and make a check for three types of discs (SL, DL, CD).

[2] to [9] — Select the loaded disc. The adjusted value is written to the address of selected disc. No further entry is necessary if [1] was selected.

2. Servo Control

```
         Servo Control
1. LD         Off R.Sled FWD
2. SP         Off L.Sled REV
3. Focus      Off
4. TRK.       Off
5. Sled       Off
6. CLVA       Off
7. FCS. Srch Off


0. Reset SLED TILT
       SA._____ SI.___ EMG. 00
DVD SL 12 cm
```

On this screen, the servo on/off control necessary for replay is executed. Normally, turn on each servo from 1 sequentially and when CLVA is turned on, the usual trace mode becomes active. In the trace mode, DVD sector address or CD time code is displayed. This is not displayed where the spindle is not locked.
The spindle could run overriding the control if the spindle system is faulty or RF is not present. In such a case, do not operate CLVA.

[10/0] Reset SLED TILT	Reset the Sled and Tilt to initial position.
[1] LD	Turn ON/OFF the laser.
[2] SP	Turn ON/OFF the spindle.
[3] Focus	Search the focus and turn on the focus.
[4] TRK	Turn ON/OFF the tracking servo.
[5] Sled	Turn ON/OFF the sled servo.
[6] CLVA	Turn ON/OFF normal servo of spindle servo.
[7] FCS. Srch	Apply same voltage as that of focus search to the focus drive to check the focus drive system.
[→] Sled FWD	Move the sled outward. Perform this operation with the tracking servo turned off.
[←] Sled REV	Move the sled inward. Perform this operation with the tracking servo turned off.
[↑] Tilt UP	Move the tilt upward.
[↓] Tilt DOWN	Move the tilt downward.

The following menus are normally not used.

3. Track/Layer Jump

4. Manual Adjustment

5. Auto Adjustment

The persons who do not know well about these menus should not use them.

6. Memory Check

```
EEPROM DATA
                 CD        — DVD —
ID No. 00       SACD     SL   L0   L1
Focus Gain     xx xx     xx   xx   xx
TRK. Gain      xx xx     xx   xx   xx
Focus Offset   xx xx     xx   xx   xx
TRK. Offset    xx xx     xx   xx   xx
L. F. Offset   xx xx     xx   xx   xx
EQ Boost       xx xx     xx   xx   xx
Jitter         xx xx     xx   xx   xx
Mirror Time    xx xx     xx   xx   xx

_
CLEAR: Default Set
```

This screen displays current servo adjusted data stored in the EEPROM. Though adjusted data can be initialized with the [CLEAR] key, they cannot be restored after initialization.
So, before clearing, make a note of the adjusted data.
For reference, the drive has been designed so that the gain center value is 20 and offset value is 80. Other values will be in a range of 10 to 80. If extreme value such as 00 or FF is set, adjustment will be faulty. In such a case, check for disc scratch or cable disconnection, then perform adjustment again.

1-6. MECHA AGING

```
     ### Aging Test MENU ###

          Operation Menu

1. Changer Open/Close Test

2. Changer Exchange Test




                      Exit: RETURN
```

On the Test Mode Menu Screen, selecting [3] executes the aging of the mechanism. Changer Open/Close Test or Changer Exchange Test are selected by pressing the [1] or [2]. During aging, the repeat cycle is displayed. Aging can be aborted at any time by pressing the [■] key. After the operation is stopped, press the [■] key or [RETURN] key aging to return to the Test Mode Menu.

[1] Repeat open and close the disc tray from disc 1 to disc 5.
[2] After press the [2] key, select the disc number by pressing some key of [1] to [5] and open the disc tray of selected number. Press the [►] key to start playback the disc.
While playback the disc, repeat open and close the disc tray of other disc.

1-7. EMERGENCY HISTORY

```
       ### EMG. History ###

Laser Hours     CD   xxxxxxxh
                DVD  xxxxxxxh

1. 00 00 00 00  00 00 00 00
   00 00 00 00  00 00 00 00

2. 00 00 00 00  00 00 00 00
   00 00 00 00  00 00 00 00

Select: 1 — 9   Scroll: UP/DOWN
(1: Last EMG.)  Exit: Return
```

On the Test Mode Menu screen, selecting [4] displays the information such as servo emergency history. The history information from last 1 up to 10 can be scrolled with [↑] key or [↓] key. Also, specific information can be displayed by directly entering that number with ten keys.

The upper two lines display the laser ON total hours. Data below minutes are omitted.

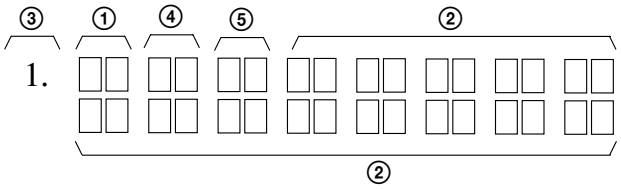
Clearing History Information

◎ Clearing laser hours
Press [DVD DISPLAY] and [CLEAR] keys in this order.
Both CD and DVD data are cleared.

◎ Clearing emergency history
Press [TITLE] and [CLEAR] keys in this order.

◎ Initializing set up data
Press [DVD MENU] and [CLEAR] keys in this order.
The data have been initialized when "Set Up Initialized" message is displayed. The EMG. History screen will be restored soon.

How to see Emergency History



① : Emergency Code
② : Don't Care
These codes are used for verification of software designing.
③ : Historical order 1 to 9
④, ⑤ : Emergency Code for only AV Decoder

Emergency Codes List
10: Communication to IC001 (TK board) failed.
11: Each servo for focus, tracking, and spindle is unlocked.
12: Communication to EEPROM IC201 (MB board) failed.
13: Writing of hours meter data to EEPROM IC201 (MB board) failed.
14: Communication to Servo DSP IC701 (MB board) failed, or Servo DSP is faulty.
20: Initialization of tilt servo and sled servo failed. They are not placed in the initial position.
21: Tilt servo operation error
22: Syscon made a request to move the tilt servo to wrong position.
23: Sled servo operation error
24: Syscon made a request to move the sled servo to wrong position.
30: Tracking balance adjustment error
31: Tracking gain adjustment error
32: Focus balance adjustment error
33: Focus bias adjustment error
34: Focus gain adjustment error
35: Tilt servo adjustment error
36: RF equalizer adjustment error
37: RF group delay adjustment error
38: Jitter value after adaptive servo operation is too large.
40: Focus servo does not operate.
41: With a dual layer (DL) disc, focus jump failed.50: CLV (spindle) servo does not operate.
51: Spindle does not stop.
60: With a DVD disc, Syscon made a request to seek nonexistent address.
61: With a CD disc, Syscon made a request to seek nonexistent address.
62: With a CD disc, Syscon made a request to seek nonexistent track No. and index No.
63: With a DVD disc, seeking of target address failed.
64: With a CD disc, seeking of target address failed.
65: With a CD disc, seeking of target index failed.
70: With a DVD disc, physical information data could not be read.
71: With a CD disc, TOC data could not be read.
80: Disc type judgment failed.
81: As disc type judgment failed, retry was repeated.
82: As disc type judgment failed, a measurement error occurred.
83: Disc type could not be judged within the specified time.
84: Illegal command code was received from Syscon.
85: Illegal command was received from Syscon.
E0: Mechanical error CDM53

Emergency Code List for AV Decoder
① D8: The "ACK" for command from AV Decoder IC401 (MB board) is no return.
D9: The "ACK" for command from Audio DSP IC501 (MB board) is no return.
DA: The "ACK" for command from AV Decoder IC401 (MB board) and Audio DSP IC501 (MB board) are no return.
DC: AV Decoder IC401 (MB board) can not operate inside.
DD: It is time out to operate by inside of AV Decoder IC401 (MB board).
② 01: The cause is Audio DSP IC501 (MB board).
30: The cause is AV Decoder IC401 (MB board).
31: The cause is both AV Decoder IC401 (MB board) and Audio DSP IC501 (MB board).
③ 00: Occurrence of DVD disc.
01: Occurrence of VCD disc.
02: Occurrence of CDDA disc.

1-8. VERSION INFORMATION

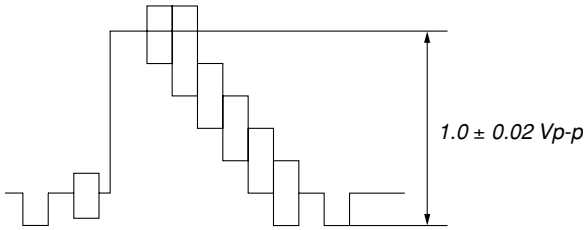
```
   ## Version Information ##

IF con.    Ver. x. xxx (xxxx)
           Group    00

SYScon.    Ver. x. xxx (xxxx)
           Model    xx
           Region   0x
    Servo DSP   Ver. x. xxx


Exit: RETURN
```

On the Test Mode Menu screen, selecting [5] displays the ROM version and region code.
The parenthesized hexadecimal number in version field is checksum value of ROM.

1-9. VIDEO LEVEL ADJUSTMENT

On the Test Mode Menu screen, selecting [6] displays color bars for video level adjustment. During display of color bars, OSD disappears but the menu screen will be restored if pressing any key.

Measurement point : VIDEO OUT jack
(75 Ω terminating resistance)
Measuring instrument : Oscilloscope
Adjustment device : RV401 on MB board
Specified value : 1.0 ± 0.02 Vpp



REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

Ver.	Date	Description of Revision
1.0	2001.09	New
1.1	2002.03	Correction of exploded views (Change the Ref. No.65 to 66). (SPM-02015)
1.2	2002.05	Addition of DISC TRAY ROCK function for servicing note. (SPM-02021)
1.3	2002.07	Addition of service position. (SPM-02058)
1.4	2002.10	SUPPLEMENT-1 : DVD test mode. (SPM-02090)
1.5	2002.10	Parts No. added for SUPPLEMENT-1 (9-873-314-81).
1.6	2003.01	Change of optical pick-up. Note addition in the optical pick-up exchange. (SPM-02121,SPM-03003)
1.7	2003.02	Change of the above note. (SPM-03005)
1.8	2003.12	Addition of Ref. No.73 and 74 for exploded views. (SPM-03091)